ORDER NO. MD9905076C2

Service Manual

Compact Disc Changer

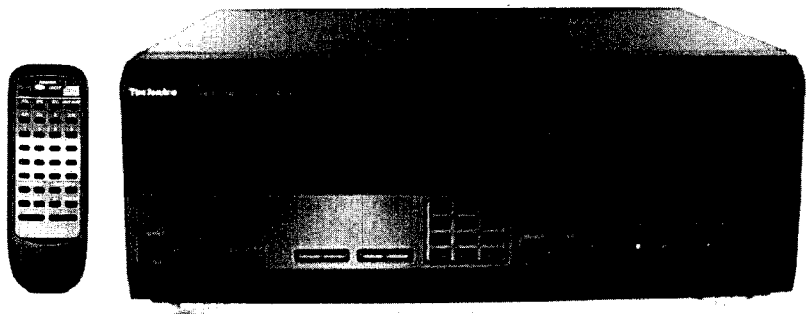
COMPACT disc DIGITAL AUDIO TEXT

MASH multi-stage noise shaping

SL-MC7

Colour

(K) . . . Black Type



Area

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	
(EG)	Germany and Italy	

TRAVERSE DECK : RAE0152Z-M Mechanism Series

■ Specifications

■ AUDIO

No. of channels	2 (left and right, stereo)
Frequency response	2 - 20,000 Hz, ±1 dB
Output voltage	2 V (at 0 dB)
Dynamic range	92 dB
S/N	100 dB
Harmonic distortion	0.007% (1 kHz, 0 dB)
Wow and flutter	Below measurable limit
DA converter	MASH (1 bit)
Output impedance	Approx. 1 kΩ
Load impedance	More than 10 kΩ

■ PICKUP

Wavelength	780 nm

■ General

Power supply	AC 230 - 240 V, 50 Hz
Power consumption	14 W
Dimensions (W x H x D)	430 x 171 x 392 mm
Weight	7.2 kg

Notes :

Specifications are subject to changes without notice.
Weight and dimensions are approximate.

Technics®

© 1999 Matsushita Electronics (S) Pte. Ltd.
All rights reserved. Unauthorized copying and distribution is a violation of law.

■ Contents

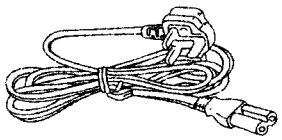
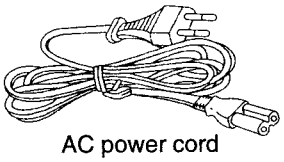
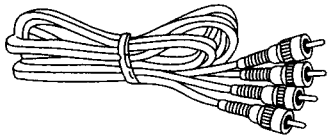
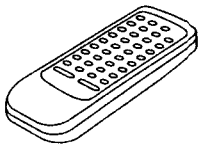
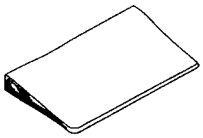
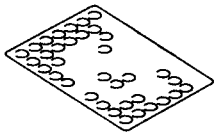
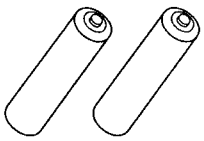
PAGE

- ACCESSORIES 2
- HANDLE PRECAUTIONS FOR TRAVERSE DECK 2
- PRECAUTION OF LASER DIODE 3
- CAUTION FOR AC MAINS LEAD 4
- CONTROLS 5
- CONNECTIONS 6
- BASIC OPERATIONS ..... 6 ~ 9
- DISC GROUPING PLAY ..... 9 ~ 10
- CD-TEXT FUNCTION ..... 11 ~ 12
- SELF-DIAGNOSIS FUNCTION ..... 13 ~ 15
- OPERATION CHECKS ..... 16 ~ 22
- TYPE ILLUSTRATION of IC's TRANSISTORS and DIODES 23

PAGE

- TERMINAL FUNCTION OF IC's ..... 23 ~ 25
- WIRING CONNECTION DIAGRAM 26
- BLOCK DIAGRAM ..... 27 ~ 30
- TROUBLESHOOTING GUIDE 31
- SCHEMATIC DIAGRAM ..... 32 ~ 39
- PRINTED CIRCUIT BOARD ..... 40 ~ 46
- CABINET PARTS LOCATIONS ..... 47 ~ 48
- LOADING MECHANISM PARTS 49
- REPLACEMENT PARTS LIST ..... 50 ~ 52
- RESISTORS & CAPACITORS ..... 53 ~ 54
- PACKING MATERIALS & ACCESSORIES 55
- PACKAGING 55

■ Accessories

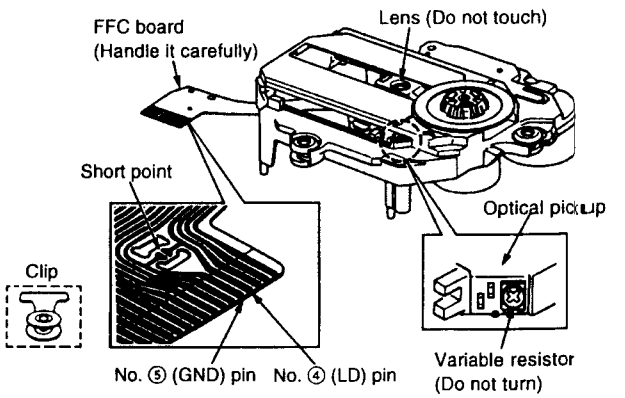
 AC power cord for United Kingdom only	 AC power cord for others	 Stereo connection cable	 Remote control
 Notebook-like binder	 Numbered stickers	 Batteries	

■ Handling Precautions for Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body. So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

- **Handling of traverse deck (optical pickup)**

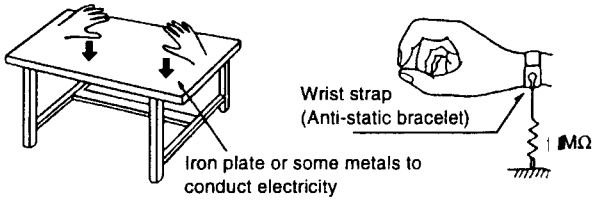
1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. The short land between the No.4 (LD) and No.5 (GND) pins on the flexible boards (FFC) is shorted with a solder build-up to prevent damage to the laser diode.
   To connect to the PC board, be sure to open by removing the solder build-up, and finish the work quickly.
3. Take care not to apply excessive stress to the flexible board (FFC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.



- **Grounding for electrostatic breakdown prevention**

1. Human body grounding
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
   Put a conducive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution:
The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).



■ Precaution of Laser Diode

CAUTION : This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens.

Wavelength: 780 nm
Maximum output radiation power from pick up: 100μW/VDE

Laser radiation from pick up unit is safety level, but be sure the followings:

1. Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

ACHTUNG : Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge : 780nm
Maximale Strahlungsleistung der Lasereinheit : 100μ W/VDE

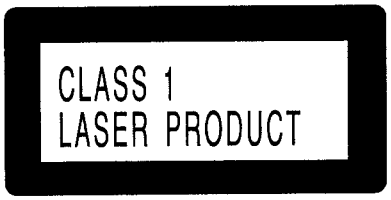
Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.

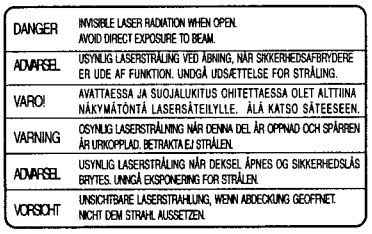
ADVARSEL : **I dette a apparat anvendes laser.**

CAUTION !
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

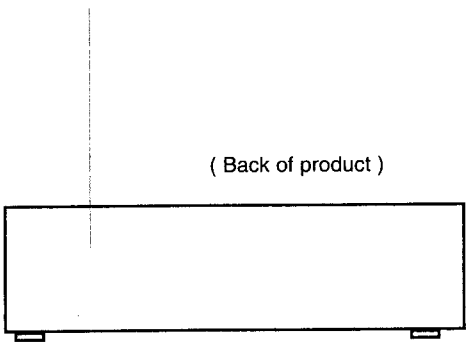
■ Use of Caution Labels



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT



DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.	(Inside of product)
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.	(Indersiden at apparatet)
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.	(Tuotten sisällä)
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.	(Apparatens insida)
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.	(Produktets innside)
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.	(Im Inneren des Gerätes)



■ Caution for AC Mains Lead

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION !
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use
Remove the connector cover.

How to replace the fuse
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

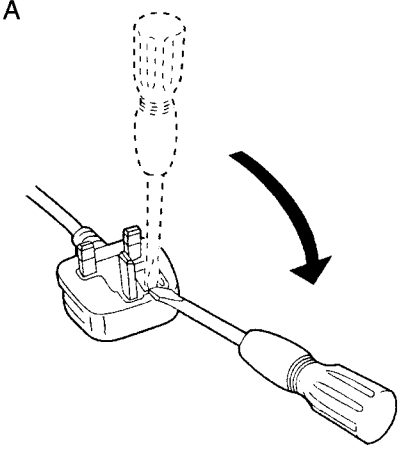
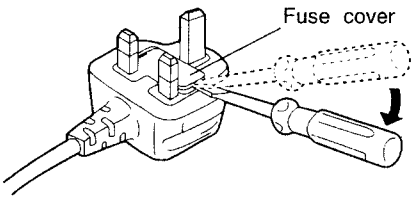


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

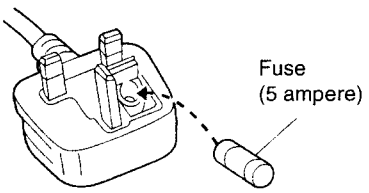
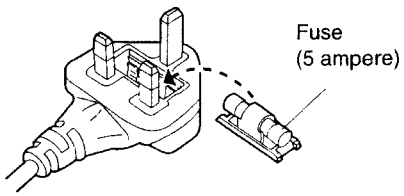
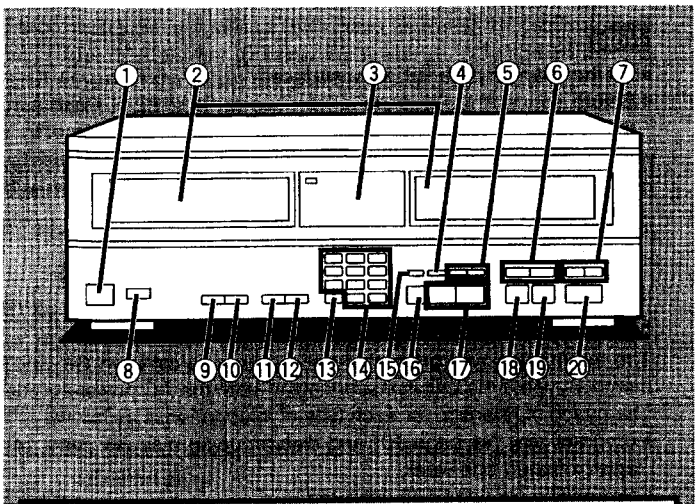
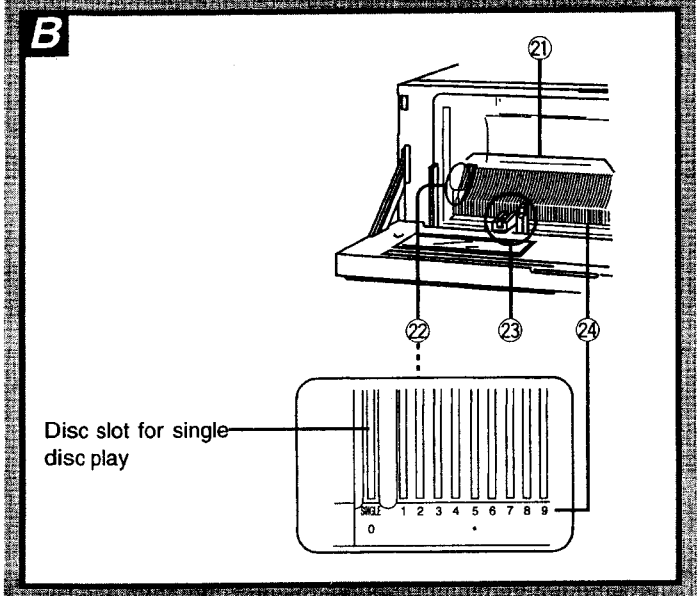


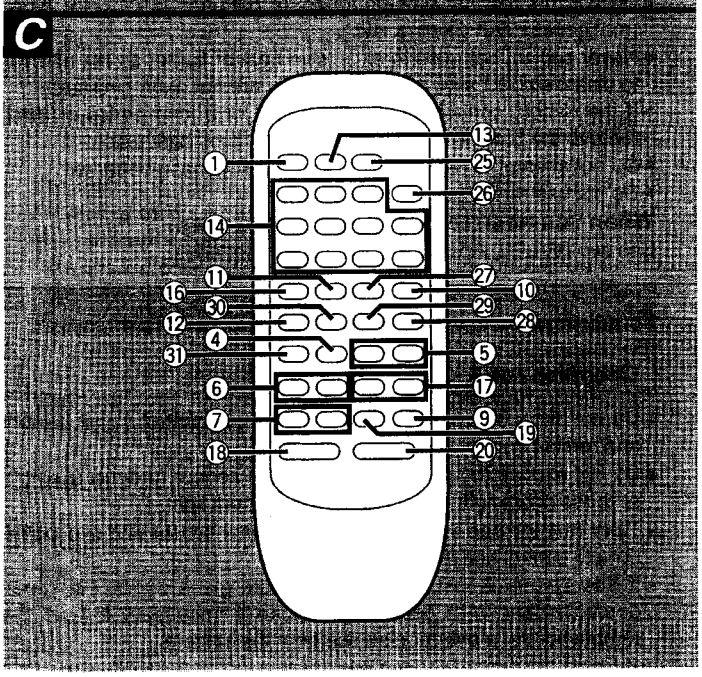
Figure B



Controls







Main unit A

① **Standby/on switch (⏻/I, POWER)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
② **Windows**
③ **Display**
④ **Text mode button (TEXT MODE)**
⑤ **Text search buttons (∨, ∧, TEXT SEARCH)**
⑥ **Search/Text character select buttons (◀◀, ▶▶, SEARCH/CHARACTER)**
⑦ **Track skip/Text cursor buttons (⏮, ⏭, SKIP/CURSOR)**
⑧ **Remote control signal sensor**
⑨ **Single disc play button (SINGLE ▶)**
⑩ **ID scan button (ID SCAN)**
⑪ **Random mode button (RANDOM MODE)**
⑫ **Programming button (PROGRAM)**
⑬ **Disc/Caps button (DISC, CAPS)**
⑭ **Numeric buttons**
⑮ **Text edit button (TEXT EDIT)**
⑯ **Disc enter button (DISC ENTER)**
⑰ **Disc skip buttons (DISC SKIP, –, +)**
⑱ **Stop button (■)**
⑲ **Pause button (II)**
⑳ **Play button (▶)**

Disc slot section B

For an explanation on how to open the front panel, see "How to set discs".

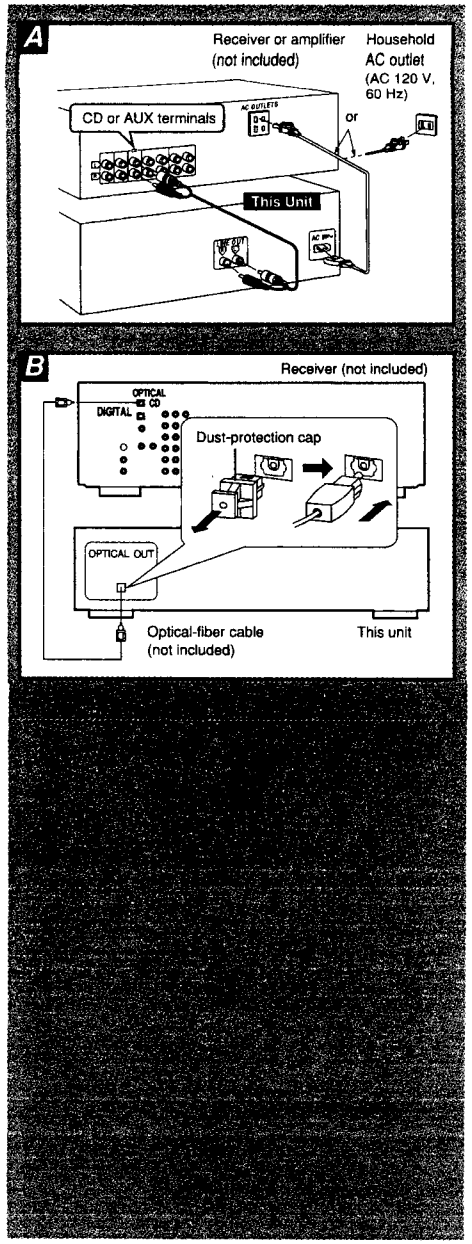
㉑ **Disc slots**
㉒ **Disc slot for single disc play (SINGLE)**
㉓ **Loader carriage**
㉔ **Slot numbers**

Remote control C

Buttons ①, ④, ⑤, ⑨ to ⑫, and ⑯ to ⑳ have the same functions as the corresponding buttons on the main unit.

⑥ **Search button (◀◀ SEARCH ▶▶)**
⑦ **Track skip buttons (⏮ SKIP ⏭)**
⑬ **Disc selector button (DISC)**
⑭ **Numeric/group select buttons**
㉕ **Group button (GROUP)**
㉖ **Group enter button (GROUP ENTER)**
㉗ **Repeat button (REPEAT)**
㉘ **Direct programming button (DIRECT PROGRAM)**
㉙ **Recall button (RECALL)**
㉚ **Clear button (CLEAR)**
㉛ **Time mode button (TIME MODE)**

■ Connections



Note

- Set the changer on a flat, level surface.
- Before connecting the changer to your audio system, make sure that the power of the changer and all other system components is turned off. A

Stereo connection cable
White (L)
Red (R)

Memory retention

The information and presetting you enter is retained in the unit's memory even if the unit is disconnected from the AC power source. The period of retention for each type of information is as follows:

- program play and disc grouping play; approximately one week
- text editing; unlimited.

Digital connection B

Remove the dust cap and connect this unit to other digital equipment with an optical fiber terminal, such as a receiver or digital surround processor.

- Leave the cap attached when this terminal is not being used.

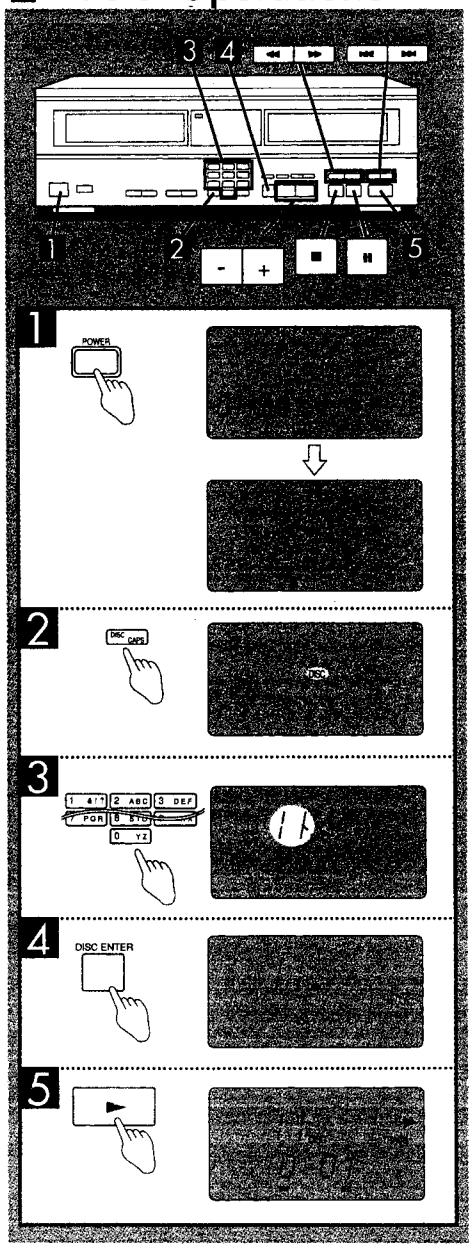
For your reference

If you have DTS format CDs, you can enjoy six channel playback by connecting this unit to a receiver or digital surround processor that has a DTS decoder.

Note Use only the optical fiber terminal when playing back DTS format discs. DTS signals can only be correctly output through the digital terminal. Connection through the stereo LINE OUT terminals will result in noise and could possibly damage your speakers.

- DTS is a trademark of Digital Theater Systems, L.P.

■ Basic Operations



Sequential play

The changer plays all the tracks on all the discs in order and stops automatically when the last track on the last disc finishes playing.

Before starting, load your discs.
Perform steps 2 to 4 within 7 seconds of each other.

1 Press [POWER].
The unit will switch on.
First, the message "CHECKING DISCS" will be displayed and then the number of the disc previously played. If it was a CD-TEXT disc then the name of the album will also be displayed.

Steps 2 and 3 are not necessary if you want to begin play from this disc.

2 Press [DISC/CAPS].

3 Press the numeric button(s) to select the disc.
To select a disc numbered over 10:
For example: "11"
[1] → [1]

For your reference
You can also select a disc with [DISC SKIP] (– or +) instead of doing steps 2 and 3.

4 Press [DISC ENTER].

5 Press [▶].
The changer plays all the loaded discs, from the selected disc, all the way through to the disc before it.
Text information will be displayed in place of the time if it is a CD-TEXT disc.

To stop play
Press [■].

The display showing the number of tracks and the total playing time is cleared if the front panel is opened.

To temporarily stop play
Press [❚❚].

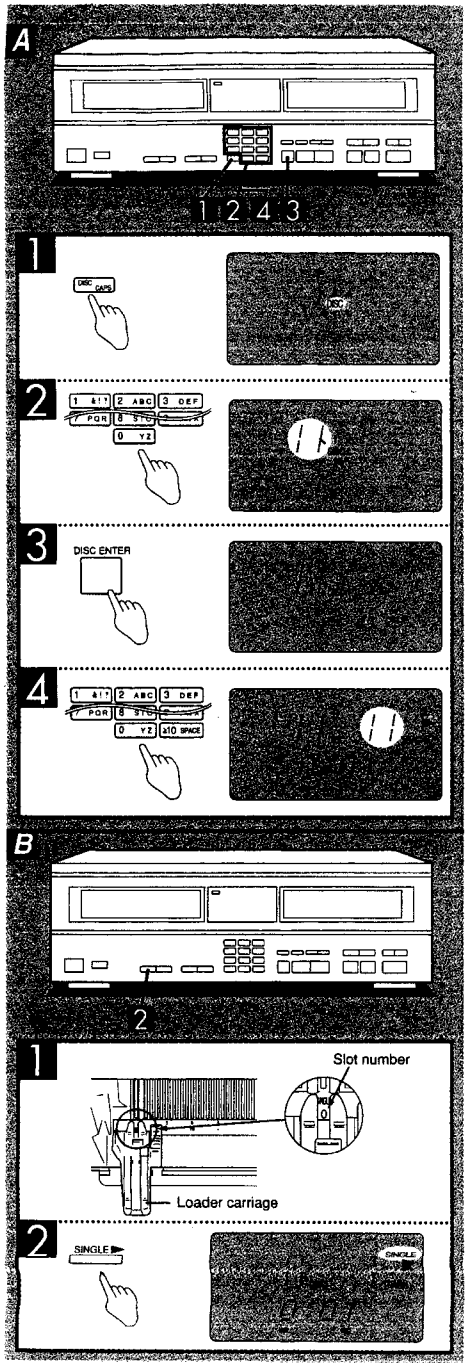
To search for a position
Press and hold either [◀◀] (backward) or [▶▶] (forward) during play. In program or random play modes, searching can only be done on the current track.

To skip tracks
Press either [|◀◀] (backward) or [▶▶|] (forward) during play. In program play, skipping goes in the programmed order.

Note
You cannot skip backwards in random mode.

To skip discs
Press either [–] (backward) or [+] (forward) either while a disc is playing or stopped.

Note
This does not work during full disc random play mode or program play.



Direct play A

You can start play from the disc and track of your choice.
Perform steps 1 to 3 within 7 seconds of each other.

1 **Press [DISC/CAPS].**

2 **Press the numeric button(s) to select the disc.**

3 **Press [DISC ENTER].**

4 **Press the numeric button(s) to select the track.**
Play starts at the selected track and continues through to the end of that CD.
To select a track numbered higher than 10:
For example: "11"
[≥10] → [1] → [1]

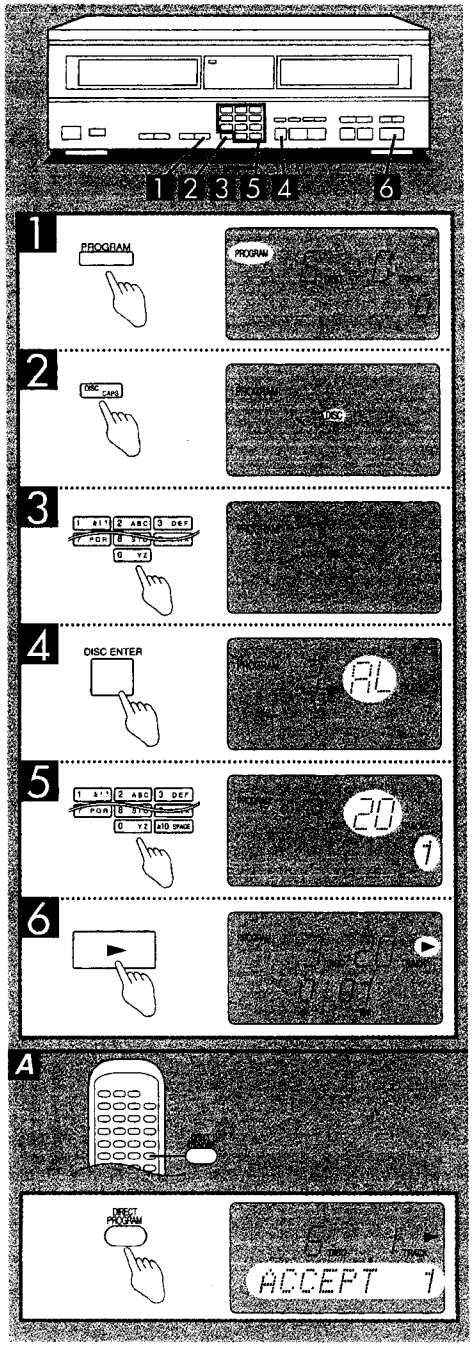
Single disc play B

Single disc play is a convenient way of playingback a specific disc, one you just bought, for example, without having to go through the usual selection procedure.

1 **Set a disc in slot No. 0.**

2 **Press [SINGLE ▶].**
The changer plays all the tracks on the disc in slot 0 and then stops automatically.

Note
Single disc play is canceled if you skip discs.



Program play

Program play lets you playback your favorite tracks in the sequence you want to hear them. The program can hold up to 32 items.
Perform steps 2 to 4 within 7 seconds of each other.

[In the stop mode]

1 **Press [PROGRAM].**

2 **Press [DISC/CAPS].**

3 **Press the numeric button(s) to select the disc(s).**

4 **Press [DISC ENTER].**
The "AL" indication shows that all the tracks on the disc are selected.

To program disc numbers only, repeat steps 2–4.
Slot No. 0 can also be programmed.

5 **Press the numeric button(s) to select the track.**

Repeat this step if you want to enter tracks from the same disc.

Repeat steps 2–5 until you have completed all entries.

Note
- PGM FULL is displayed if you try to enter a 33rd item.
- Empty slots and track numbers that don't exist on the discs can be programmed but clear when play starts.

6 **Press [▶].**
The changer plays the tracks in the programmed order and then stops automatically.

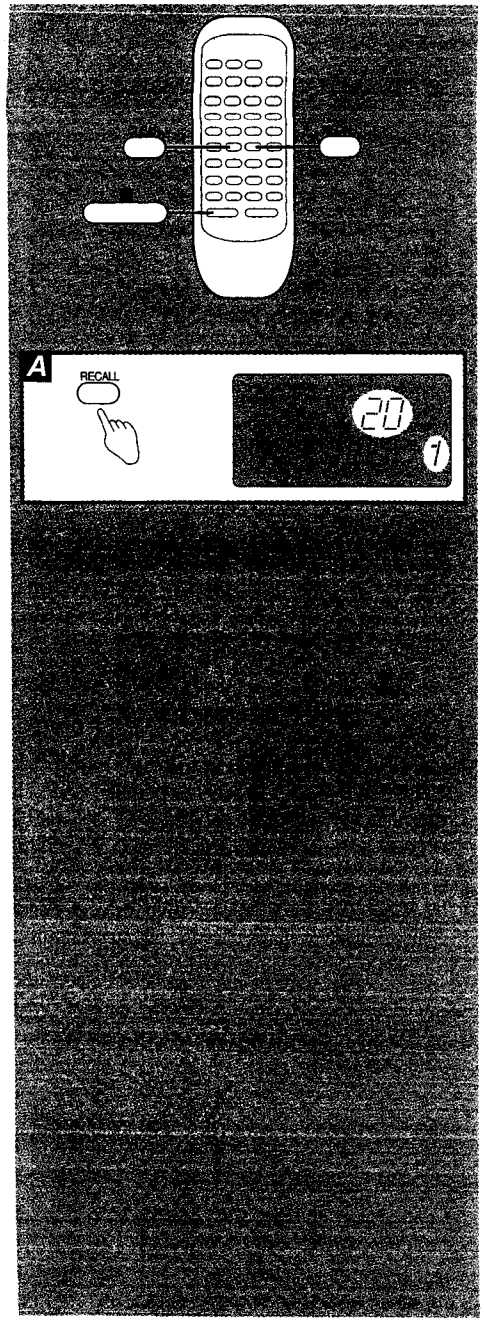
To enter additional selections during play, repeat steps 2–5.

Direct programming A

(Only available from the remote control.)
This function allows you to add a track to your program while listening to it.

[While the track you want to program is playing]
Press [DIRECT PROGRAM].
When you make a program as explained under "Program play" above, and then perform this procedure without clearing the program first, the selected track is added to the end of the program.
To listen to programmed tracks, press [PROGRAM] and check "PROGRAM" appears on the display, then press [▶].

Note
- If you press [DIRECT PROGRAM] and there *are already 32 items* in the program, "PGM FULL" is displayed and the track cannot be added.
- During program play, [DIRECT PROGRAM] does not respond to touch.



To check programmed contents A

(Only available from the remote control.)

Press [RECALL].
The programmed tracks are displayed in order each time it is pressed.

To clear programmed contents

(Only available from the remote control.)
[In the stop mode]

To clear a specific item from the program
Press recall until the item is displayed, then press [CLEAR].

To clear the last item on the program
Press [CLEAR].

To clear the entire contents of the program
Press [■].

To cancel the program mode

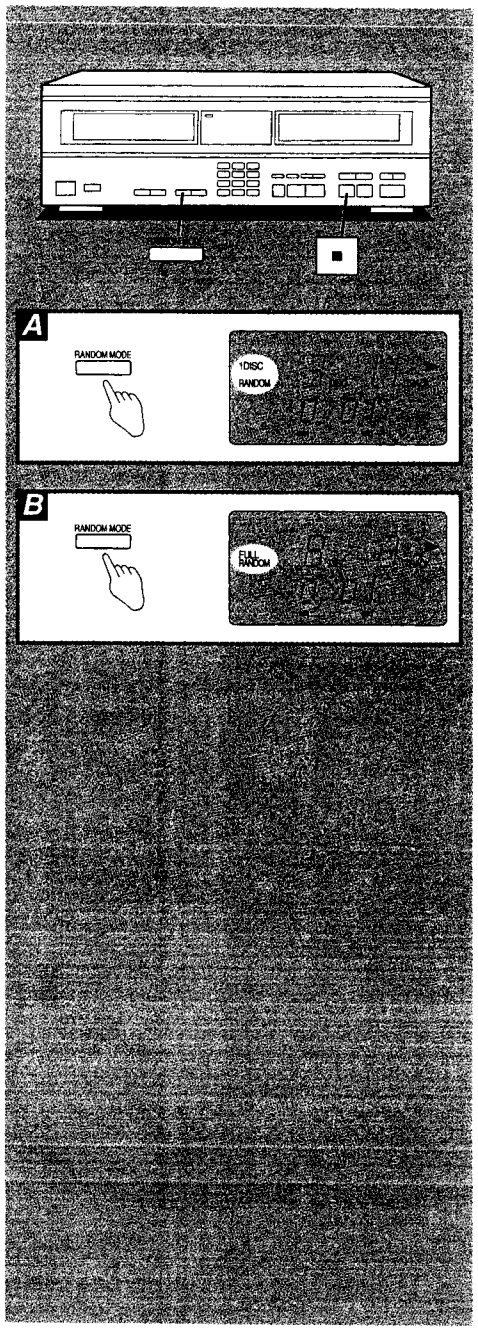
[In the stop mode]
Press [PROGRAM].
The [PROGRAM] indicator goes out.

The contents of the program are stored in the memory.

To replay your program
1. Press [PROGRAM].
2. Press [▶].

Special note on recording programs

The changer needs time to change the discs and find the tracks. Consequently, it will take the changer slightly longer than the total track time to record everything. Exactly how much longer depends on the contents of the program.



Random play

The tracks will be played in random order. There are two types of random play as described below.

One disc random play A

The changer will play all tracks on the current disc in random order. Then, it will choose a new disc randomly, excluding the discs already played, and play all tracks on that disc in random order.

[In the stop or play mode]
Press [RANDOM MODE] to select "1 DISC RANDOM".
Each time the button is pressed
1 DISC RANDOM → FULL RANDOM → (Off)

For your reference
In the single disc play mode
Only tracks from the disc in slot No. 0 are played in random order.

In the disc grouping play mode.
The discs in the chosen group are played as in one disc random play above.

Full random play B

Tracks are played in random order from amongst all the tracks on all the loaded discs. In this mode, it is possible that a track will be played twice, or not played at all.
(A maximum of 250 tracks are played.)

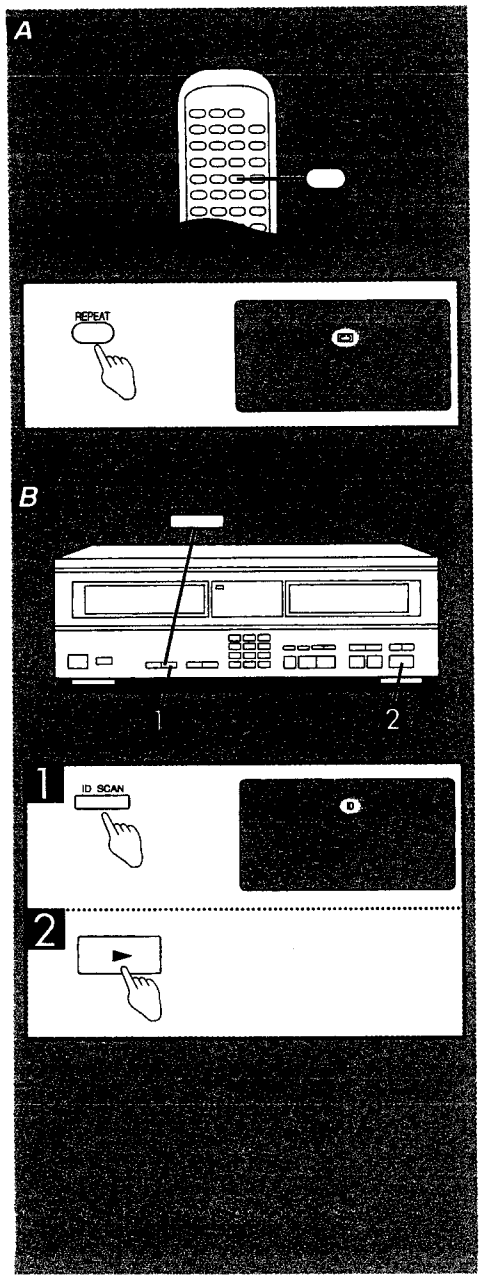
[In the stop or play mode]
Press [RANDOM MODE] to select "FULL RANDOM".
Each time the button is pressed
1 DISC RANDOM → FULL RANDOM → (Off)

Note
The disc in slot No. 0 will not be played.

In the disc grouping play mode.
The discs in the chosen group are played as in full random play above.

To cancel random play mode

Press [■].
The "1 DISC (or FULL) RANDOM" indicator will go out.



Repeat function A

(Only available from the remote control.)
This repeats play in the chosen mode.

[Before or during play]
Press [REPEAT].

To cancel repeat mode
Press [REPEAT].

To repeat a track or set of tracks
1. Program the track or tracks.
2. Press [REPEAT] so "↻" is displayed.
3. Press [▶].

For your reference
In random mode, the order is different each time the process is repeated.

ID scan function B

This function helps you find a particular track. It searches through the tracks and then plays a 10 second piece of each track around the loudest part of the track.

1 Press [ID SCAN].
ID scan will start.

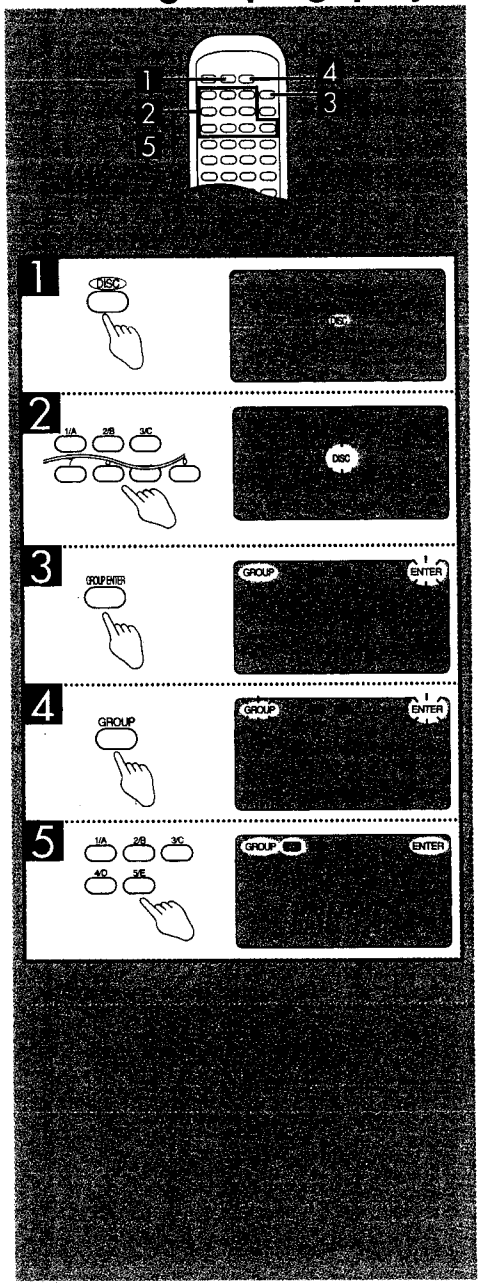
[When the desired track has been found]

2 Press [▶].
The changer will play the track from the beginning.

To cancel ID scan

Press [ID SCAN].
The "ID" indicator will go out.
The changer will continue to play from the track being played.

■ Disc grouping play



(Only available from the remote control.)
You can put discs into 5 groups (A–E). You can then play the discs in those groups.
- Each disc can belong to more than one group.
- [SL-MC7] Each group can include up to 110 discs.
- Each group can be named.

To make groups

Perform steps 1 to 5 within 7 seconds of each other.
You cannot select slot No. 0.
[During sequential play or while it is on stopped]

1 Press [DISC].

2 Press the numeric button(s) to select the disc.
To select a disc numbered over 10
For example: "19"
[1] → [9]

3 Press [GROUP ENTER].
If the disc is already registered in a group, the group's letter lights up.

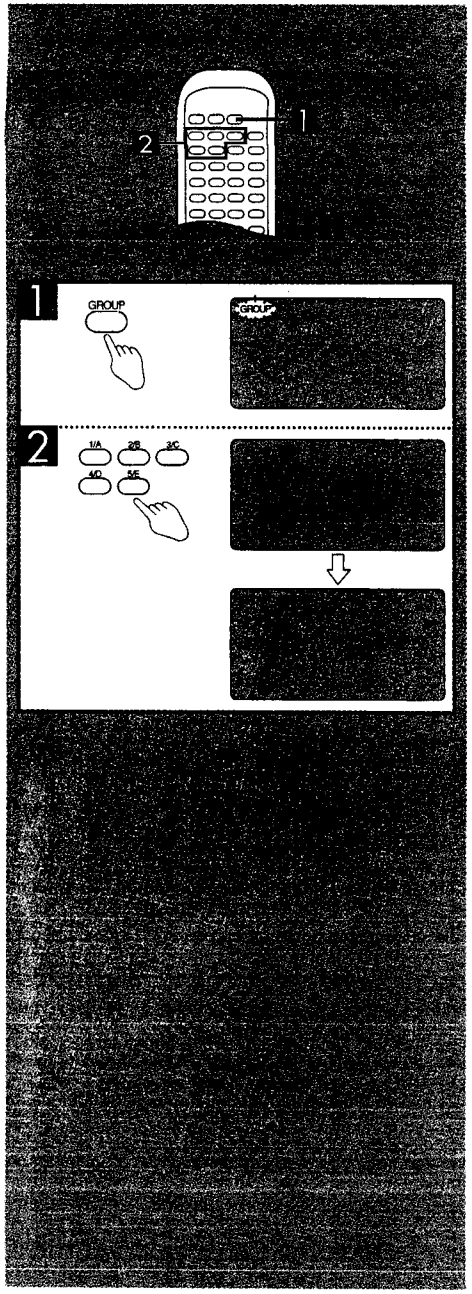
4 Press [GROUP].

5 Press the numeric button corresponding to the group (A, B, C, D or E).
The disc chosen in step 2 is registered into the selected group.

Repeat steps 1–5 to register other groups.

To check what discs are in what groups

[While stopped]
1. Press [GROUP].
2. Press the numeric button corresponding to the group.
3. Press [■].
4. Press [DISC SKIP] (– or +).
   The numbers of the discs in the group will be displayed each time the buttons are pressed.



To cancel discs from groups

1. Press [DISC].
2. Select the disc you want to clear with the numeric buttons.
3. Press [GROUP ENTER].
4. Press [GROUP].
5. Press the numeric button corresponding to the group.
   The selected group indication on the display will go out.

For your reference

If the disc is registered in more than one group, you can cancel it from all groups in a single operation by pressing [■] in step 4 (in the stop mode).

Playing back discs in a group

[While stopped or during sequential play]
First, follow the steps on the previous page to register the groups.

1 Press [GROUP].

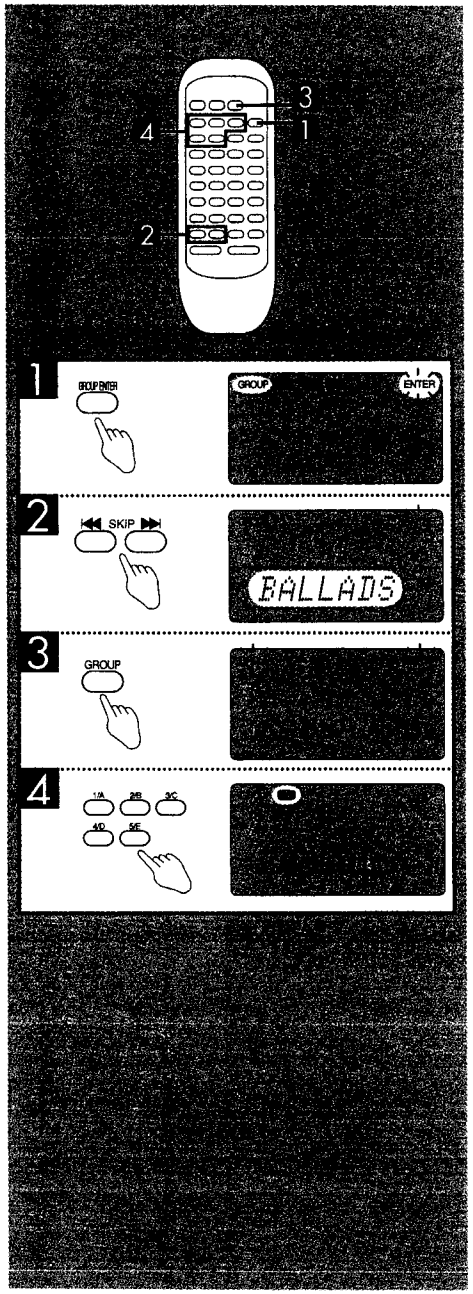
2 Press the numeric button corresponding to the group.

To cancel disc grouping play mode

(While the changer is stopped.)
Press [GROUP] and then the numeric button corresponding to the group shown on the display.

Note

- The name of the group is shown if it has been named.
- If you press the group button of a group which has no discs registered in it, the message "NO INPUT" will appear on the display.



To name groups

You can name your groups. The changer has several preset names to choose from.

[During sequential play or while stopped]

1 Press [GROUP ENTER].

2 Press [SKIP] (⏮ or ⏭) to select the name.
The pre-entered names will appear in the following order when the buttons are pushed.

BALLADS ⟷ BLUES ⟷ CLASSIC ⟷ COUNTRY ⟷ DANCE
↕ FAVORITE ↕ HIP HOP ↕
RESET ↕ ROMANTIC ↕
ROCK ⟷ POP ⟷ PARTY ⟷ OLDIES ⟷ NEW AGE ⟷ JAZZ

3 Press [GROUP].

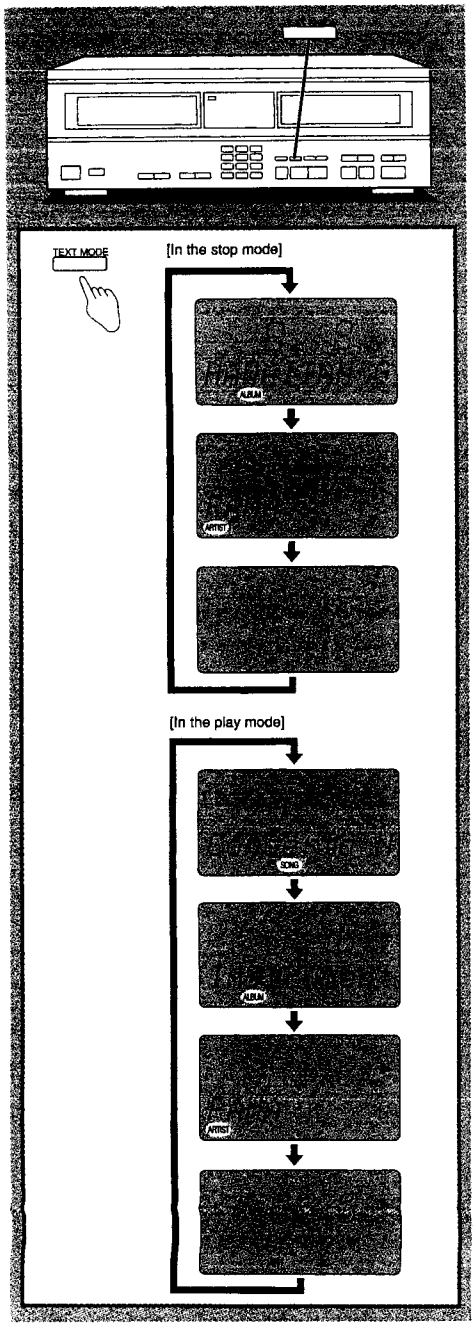
4 Press the numeric button corresponding to the group you want to name.

Repeat steps 1–4 to name the other groups.

To cancel names

1. Press [GROUP ENTER].
2. Select "RESET" in step 2.
3. Press [GROUP].
4. Select the group name you want to clear.
   It will now be shown as "GROUP A...E".

■ CD - TEXT function



This function shows the title of the CD, the name of the artist, or the song title. There are discs with this information already stored on them, called CD-TEXT discs, but this function also works with ordinary discs.

Note

- The information on CD-TEXT discs is automatically read when they begin playing. The title of the CD and the artist name must be entered manually for ordinary discs. Enter this information before doing the following.
- Song titles cannot be displayed with ordinary discs.

Displaying a CD's information

Press [TEXT MODE].

The display is changed in the following order:

In the stop mode

ALBUM (Album title) → ARTIST (Artist name) → Total playing time

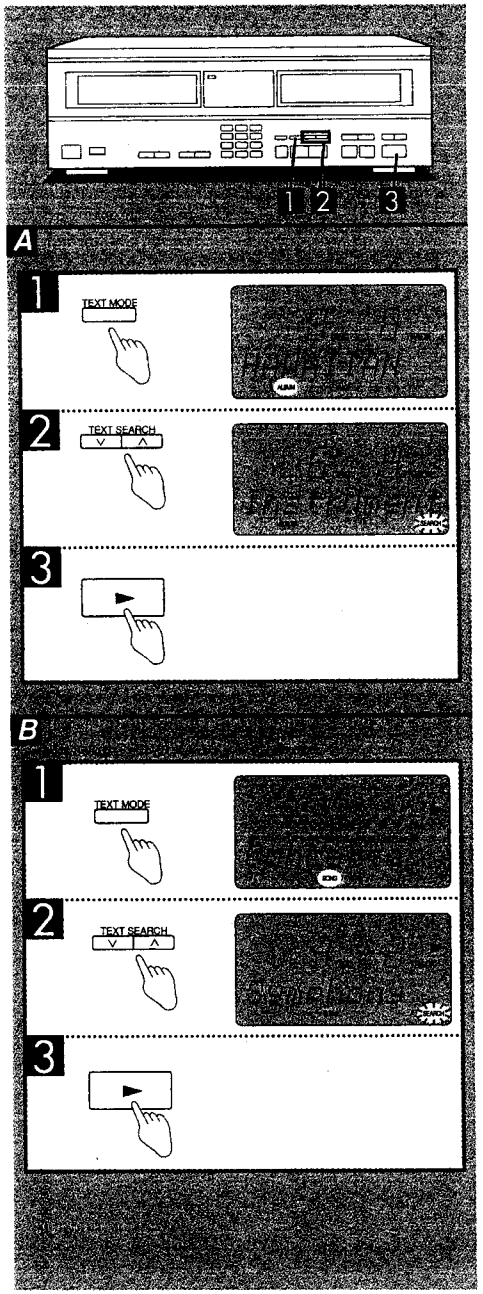
In the play mode

SONG (Song title) → ALBUM (Album title) → ARTIST (Artist name) → time display

Song titles are displayed whenever a track is changed, even if the time display is chosen.

Note

- Up to 32 characters of text information can be displayed while the changer is stopped. The entire text is displayed during playback, even if it is longer than 32 characters.
- Song titles are not displayed after a certain number of tracks if there are many tracks on the disc or if titles are exceptionally long.
- Text information is attached to the slot. Any information entered into memory will be displayed for that slot until another CD-TEXT disc is played in that slot or the information is entered manually.
- Some CD-TEXT discs do not have information about the artist or track. Nothing is displayed if this is the case.
- Only one artist name per disc is displayed. It will be the name of the main artist on the disc and does not change with each track.



To search discs or tracks using text information (TEXT SEARCH)

There are 3 search modes: album title, artist name or song title.

Note

You cannot text search in program play/random play/ID scan mode.

To find a specific CD (Album search/Artist search) A

1 Press [TEXT MODE] to select "ALBUM" or "ARTIST".

2 Press [TEXT SEARCH] (∨ or ∧) to select the disc.

∨: Changes in reverse alphabetical order.
∧: Changes in alphabetical order.

3 Press [▶].

The changer will start playing the selected disc.

For your reference

- In the disc grouping play mode, the search is limited to the selected group.
- A text search can be performed while a disc is playing. In this case, the display will not show the information about the disc currently playing.

To find a specific song (Song search) B

This function only works with CD-TEXT discs that have song information on them.

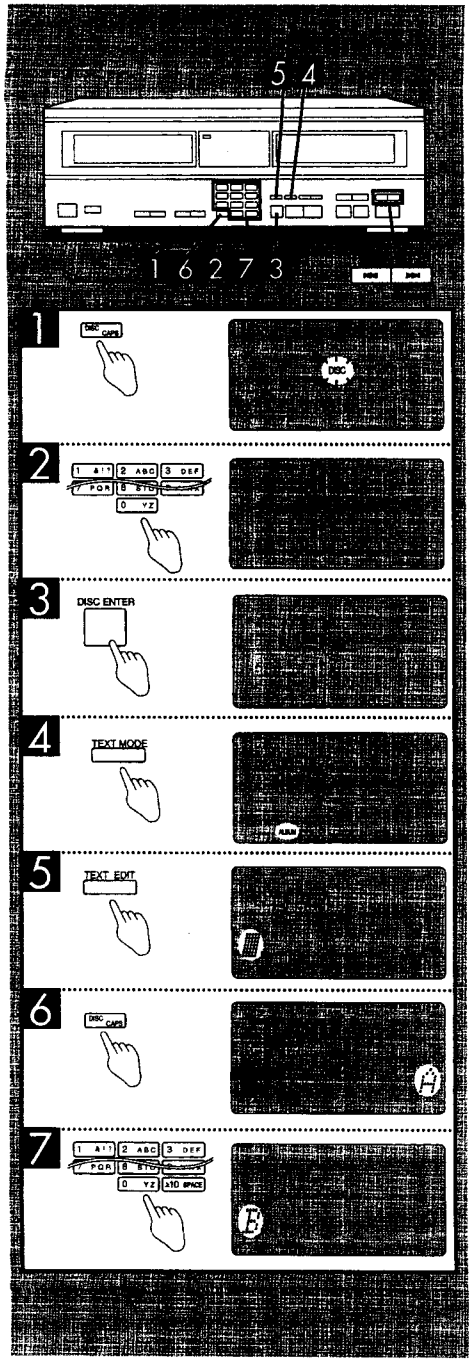
[During play]

1 Press [TEXT MODE] to select "SONG".

2 Press [TEXT SEARCH] (∨ or ∧) to select the track.

3 Press [▶].

Play begins at the selected track and then continues through to the last track on the disc before.



Entering CD information manually (TEXT EDIT)

32 characters worth of text information can be entered each for the album name and artist name. This can be done for each disc loaded in the changer.

Note

- The information entered for the CD is attached to the slot. If the CD is moved to another slot, the information will not be displayed.
- The information on CD-TEXT discs takes preference over manually entered information, so any information entered will be cleared once a CD-TEXT disc is played in a slot.

Perform steps 1 to 3 within 7 seconds of each other.

[while stopped]

1 Press [DISC/CAPS].

2 Select a disc with the numeric buttons.

3 Press [DISC ENTER].

4 Press [TEXT MODE] to select "ALBUM" or "ARTIST".

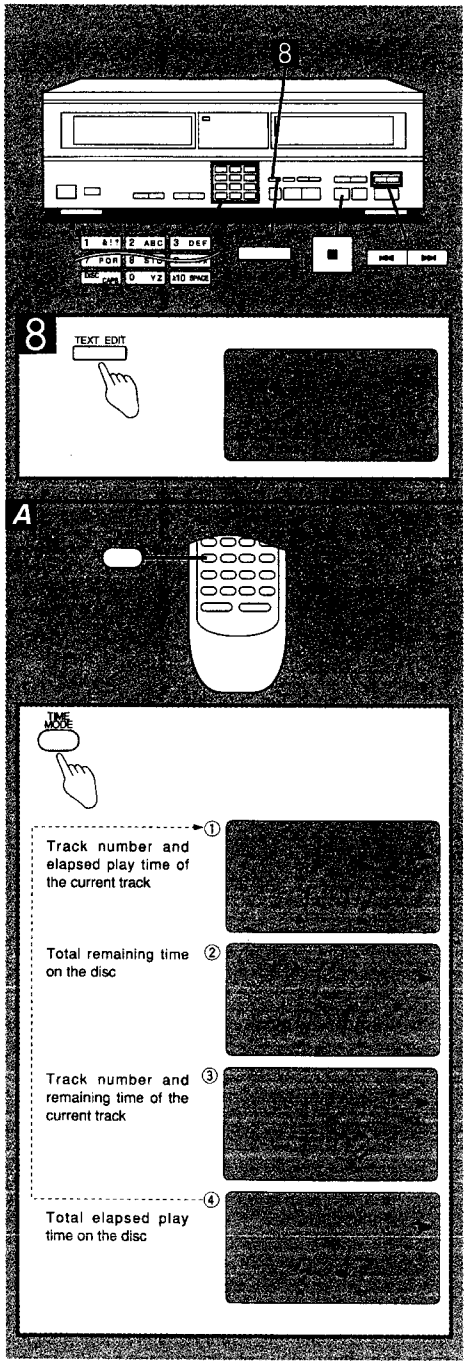
5 Press [TEXT EDIT].
The display is now ready for text to be entered.

6 Press [DISC/CAPS] to select the input mode.
The display changes as follows every time the button is pressed.
A (CAPITALS) → a (lower case) → 1 (numerals)

7 Press the numeric buttons to enter the text.
To continue entering characters with the same numeric button, press [SKIP/CURSOR] (▶▶|).
The character is entered if a different numeric button or [SKIP/CURSOR] (▶▶|) is pressed, and the cursor moves to the next position.
Repeat steps 6 and 7 to enter more characters.

numeric button	Characters, symbols, and functions
1	! " # $ % & ' ( ) * + , − . / : ; < = > ? @ [¥] ^ _ ` { | } ~ ¡ ¢ £ ¤ ¥ ¦ § ♪ © ª « ¬ ® ¯ ° ± ² ³ ´ µ ¶ · ¸ ¹ º » ¼ ½ ¾ ¿ À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ð Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã ä å æ ç è é ê ë ì í î ï ð ñ ò ó ô õ ö ÷ ø ù ú û ü ý þ ÿ
2	A B C
3	D E F
4	G H I
5	J K L
6	M N O
7	P Q R
8	S T U
9	V W X
0	Y Z
≥10	SPACE

In the numeral mode, the numeral corresponding to the numeric button is entered. In the other modes, the character displayed changes in the order shown in the chart each time the numeric button is pressed.



8 Press [TEXT EDIT].
The text you entered is confirmed and displayed.

Canceling the text editing mode

The information entered can be cleared at any time before step 8.

Press [■].

Note

Letters and symbols appearing on the display may vary slightly from the printed listing.

Changing information you have entered

1. Display the information you want to change.
2. Press [TEXT EDIT].
3. Move the cursor to the character you want to change with [SKIP/CURSOR] (|◀◀ or ▶▶|).
4. Enter the new character with the numeric buttons.
5. Press [TEXT EDIT].

Clearing information you have entered

1. Display the information you want to change.
2. Press [TEXT EDIT].
3. Press [CLEAR] on the remote control.
4. Press [TEXT EDIT].

Time mode selection A

(Only available from the remote control.)
You can see various information about the time on the disc you are playing.

[In the play or pause mode]
Press [TIME MODE].
The display changes in the order shown in the diagram.

In all play modes
When track number 21 or greater is playing, display ③ shows "--:--". ① is displayed if play is stopped and then started again.

In the program/random play mode
The displayed information will alternate between displays ① and ③ each time the button is pressed.

Time information remains displayed in the text information display area as long as the unit is in time mode.

■ Self - Diagnostic function

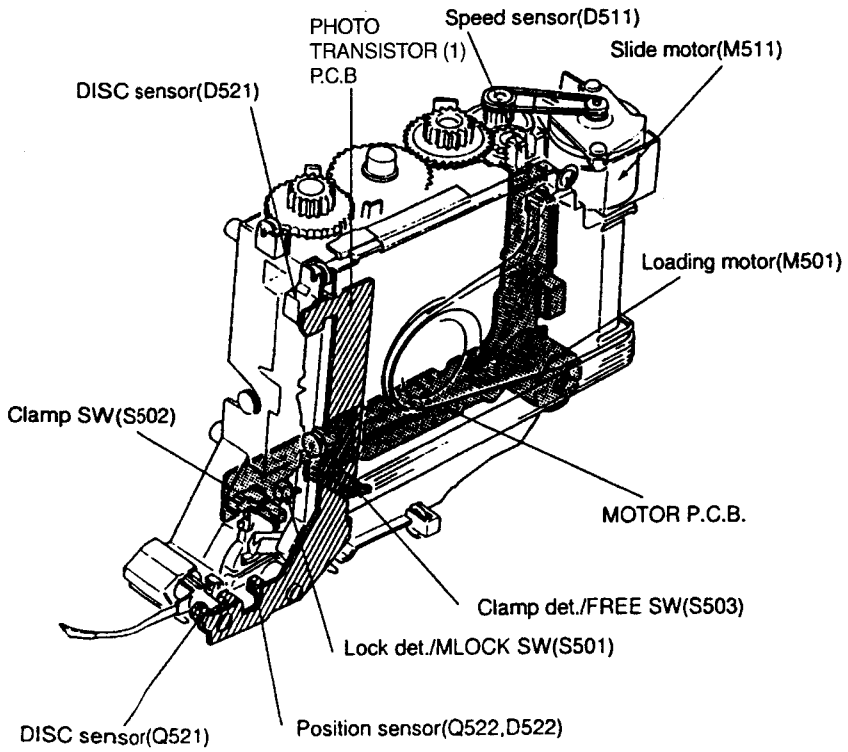
Mode	Procedure	Content	Use
FL display mode	Turn ON power button with no disc loaded. ↓ Press the following 3 buttons simultaneously: PLAY(►),STOP(■),TRACK SKIP(⏮) ↓ FL all unlit ↓ Press DISC button ↓ Press specified button ↓ FL all lit	FL all unlit / all lit	Enables checking of whether FL and each SW are okay or not, before set disassembly.
Mechanical mode	Turn ON power button with no disc loaded. ↓ Hold down the STOP (■) button for at least 2 seconds. ↓ Simultaneously press the TRACK SKIP (⏭) button for at least 2 seconds,while holding down the STOP (■) button. ↓ C (Appears on display)	Displays defective points while performing a series of mechanism operations. C F-15: PU rest SW etc. C F-27: Slide drive system C F-28/ C F-29: Loading system F26: Main IC defect (Automatically displayed when power is turned ON, regardless of mode setting.)	Enables fault to be diagnosed, before set disassembly.
Test mode	Turn OFF power button once, with no disc loaded. ↓ Turn ON power while simultaneously holding down the following button: PLAY(►), STOP(■) ↓ TEST MODE (Appears on display) → Press 1 button → Press 2 button Mount disc in single (slot 0) position. → Press 3 button	1 button: Results in independent operation of traverse deck. 2 button: Repeats loading / unloading operation. 3 button: Automatically repeats loading / unloading / slide operation.	Use to check correct operation after disassembly. Use to check correct operation after repair.
Servo adjustment mode	After mounting disc in slot, turn OFF power button once. ↓ Turn ON power while simultaneously pressing the following three buttons: PLAY(►),PAUSE(❚❚),STOP(■) ↓ Press the PLAY(►) button.	Displays servo circuit status on FL. 	Enables checking of servo status. * F = Focus servo * T = Tracking servo * C = CLV servo

Display and Handling

Display	Cause	Handling
F-15	The sympton is slow start-up of the CD when power is turned ON. The cause is defective contact of the OPU rest switch.	Abnormal rest detection switch (S701).
F-26 (Automatic display)	Sympton is that the unit does not operate when the play button is pressed, or the CD is skipping etc. The probable cause is defective system control IC. Lock det./MLOCK SW (S501) does not go ON/OFF in initial operation.	* Check system control (IC401) and servo IC (IC702). * Check each IC and the servo circuit. * Check Lock det./MLOCK SW (S501).
F-27	Sensor abnormal. Load on slide drive system is too great. Loading unit does not move to the right and left. Slide motor malfunction.	* Check slide motor (M511). * Check position sensor (Q522, D522) and speed sensor (D511). * Check gears of slide drive system. (Jammed by foreign matter or great teeth missing.)
F-28	Clamp det./FREE SW does not go OFF, and Clamp det.SW (S502) does not go ON within 5 seconds during loading.	* Check Clamp det./FREE SW (S503) and Clamp SW (S502). * Check loading motor (M501). * Check loading drive system. (Riding-up, shifting or foreign matter jamming of levers, missing gear teeth etc.)
F-29	Clamp det./FREE SW (S503) and clamp SW do not go ON within 5 seconds during unloading.	

<Method for returning from error display to normal display>

* C F-26: When repair is complete, the error display disappears automatically.
* C F-15/ 27/ 28/ 29: Power SW ON/ OFF.

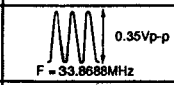
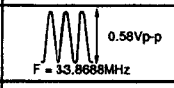


Ref. No.	Part name (Part number)
IC401	Micro computer IC (UPD78043F045)
IC702	Digital LSI IC (MN662741RPA)
S501	Lock det./MLOCK SW (RSP1A017-A)
S502	Clamp det. SW (RSH1A005)
S503	Clamp det./FREE SW (RSH1A005)
S701	Rest detection SW (RSH1A043-U)
Q521	Disc sensor (PT4810F)
Q522	Position sensor (PT480F)
D511	Speed sensor (RSQGP1S53V)
D521	Disc sensor (LN66S)
D522	Position sensor (GL480V)
M501	Loading motor (RFKPLMC50PAK)
M511	Slide motor (RFKPLMC50PBK)

Error code explanations

※ The unit is satisfactory if the error code is **E - 0** or **E - 2.**

※ Before testing, check that the test disc is free of scratches and optical pickup is clean.

FL error code display	Symptom	Probable cause	Signal to check		Normal voltage and waveform values	
			Signal name	Location	PLAY	STOP
E - 1	Focus and tracking offset adjustments not completed in the specified time period.	1. Clocks X1 and X2, power supply V_{DD} and reset/RST, all on IC702. 2. MDATA, MCLK, MLD and SENSE signal to/from mechanism controller.	MDATA	IC702 ⑧ pin		0V
			MCLK	IC702 ⑦ pin		4.9V
			MLD	IC702 ⑨ pin		4.9V
			SENSE	IC702 ⑩ pin	—	—
			/RST	IC702 ⑱ pin	4.8V	4.8V
			X1	IC702 ⑤⑧ pin		
			X2	IC702 ⑤⑨ pin		
E - 3 E - 5 E - 7 E - 9 E - B E - D E - F	Disc play unstable.	1. Scratches or contaminants on disc surface. 2. Focus and tracking servo circuits (check waveforms, voltages, and part values.) 3. Spindle driver circuit. 4. Optical pickup.	FE	IC702 ㉜ pin		2.4V
			TE	IC702 ㉝ pin		2.4V
			FOD	IC702 ㉘ pin	2.4V	2.4V
			TRD	IC702 ㉗ pin	2.4V	2.4V
			KICK	IC702 ㉖ pin	2.4V	2.4V
			/FLOCK	IC702 ⑪ pin	—	—
			/RF DET	IC702 ㊽ pin	0V	4.8V
			RF	TJ701		2.4V
			STAT	IC702 ⑰ pin	4.8V	0V
E - 4 E - 6 E - C E - E	Best "Eye" (PD Balance) adjustment not completed in the specified time period.	1. Scratches or contaminants on disc surface. 2. Focus and Tracking servo circuit (check waveforms, voltages, and part values.) 3. Optical pickup.	FBAL	IC702 ㉚ pin	2.4V	2.4V
			RF	TJ701		2.4V
			FE	IC702 ㉜ pin		2.4V
			/TLOCK	IC702 ⑫ pin	—	—
			OFT	IC702 ㊱ pin	0V	0V
E - 8 E - A	Focus or Tracking gain adjustment not completed in the specified time period.	1. Scratches or contaminants on disc surface. 2. Focus and Tracking servo circuit (check waveforms, voltages, and part values.) 3. Optical pickup.	FE	IC702 ㉜ pin		2.4V
			TE	IC702 ㉝ pin		2.4V
			/TLOCK	IC702 ⑫ pin	—	—
			OFT	IC702 ㊱ pin	0V	0V

■ Operation Checks

"ATTENTION SERVICER" Some chassis components may have sharp edges. Be careful when disassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**
4. **For details disassembly, please refer to SL-MC410 series.**

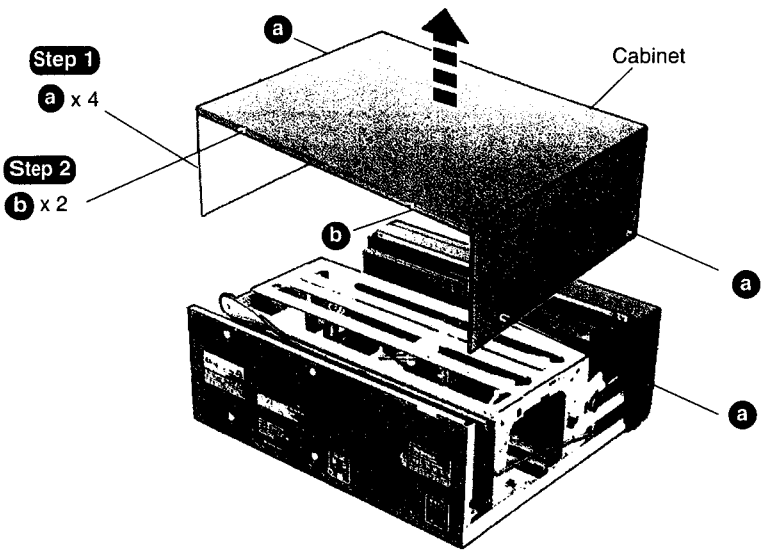
• Contents

• **Checking Procedure For Each Major P.C.B.** page

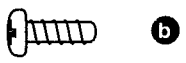
1. Checking Procedure For Front Panel P.C.B. ..... 16 ~ 17
2. Checking Procedure For Main P.C.B. and Power P.C.B. 18
3. Checking Procedure For Servo P.C.B. ..... 19 ~ 22

Warning : This product uses a laser diode. Refer to caution statement on page 3.
ACHTUNG : • Die Lasereinheit nicht zerlegen.
• Die Lasereinheit darf nur gegen eine vom Hertsteller spezifizierte Einheit ausgetauscht werden.

1. Checking Procedure For Front Panel P.C.B.

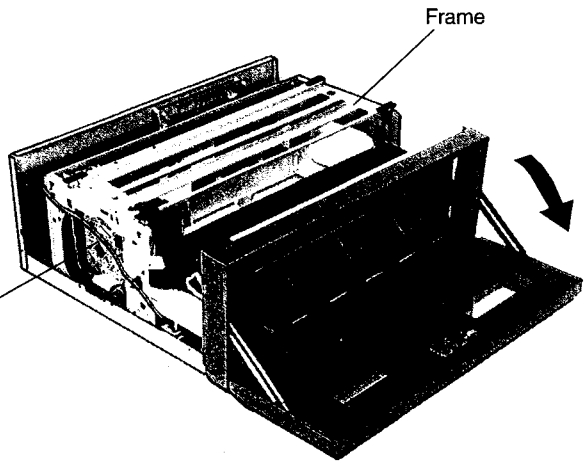


[SNE2129-3] (Black)



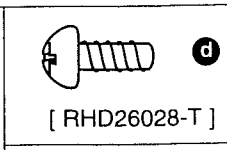
[XTBS3+8JFZ1] (Black)
[XTB3+8JFZ] (Black)

Step 3
Remove the top cabinet in the direction of arrow.



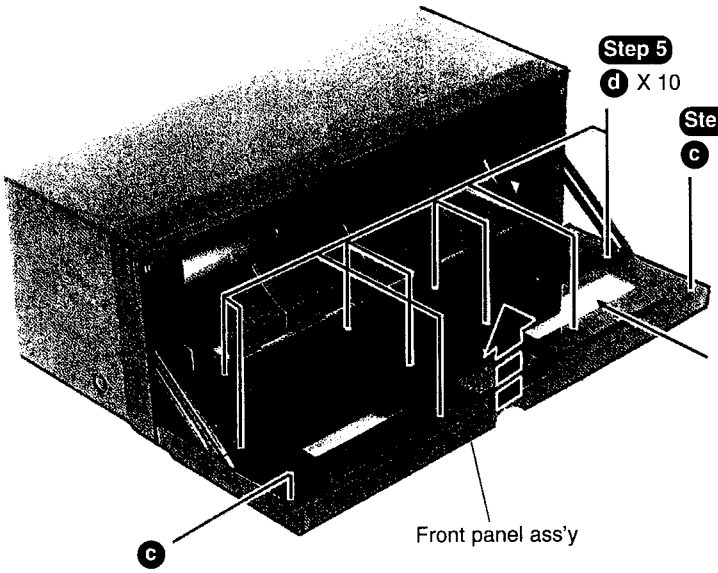
Servo P.C.B.
(Solder Side)

Step 4
Pull down the front panel.



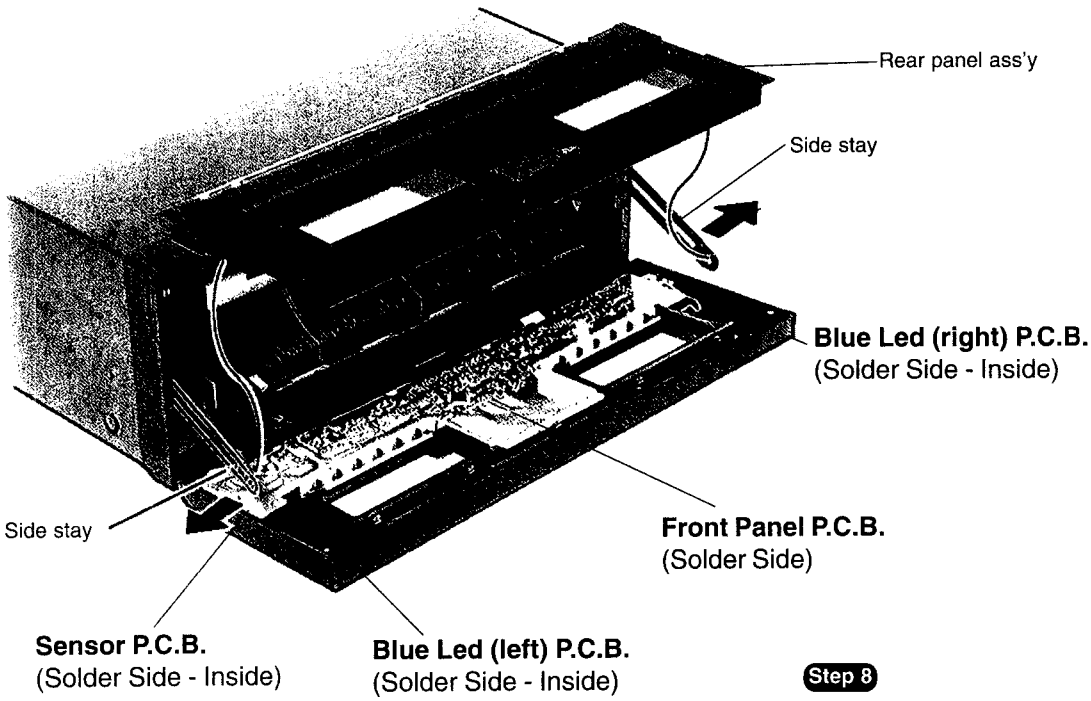
[RHD26028-T]

[RHD26023-K]



Step 7

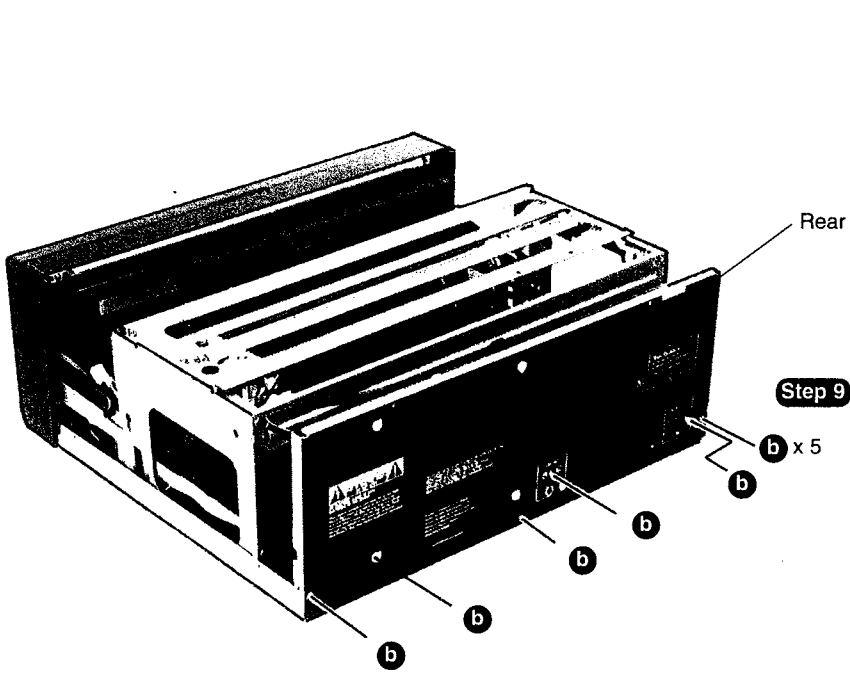
Lift up the rear panel ass'y.

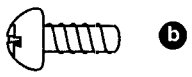


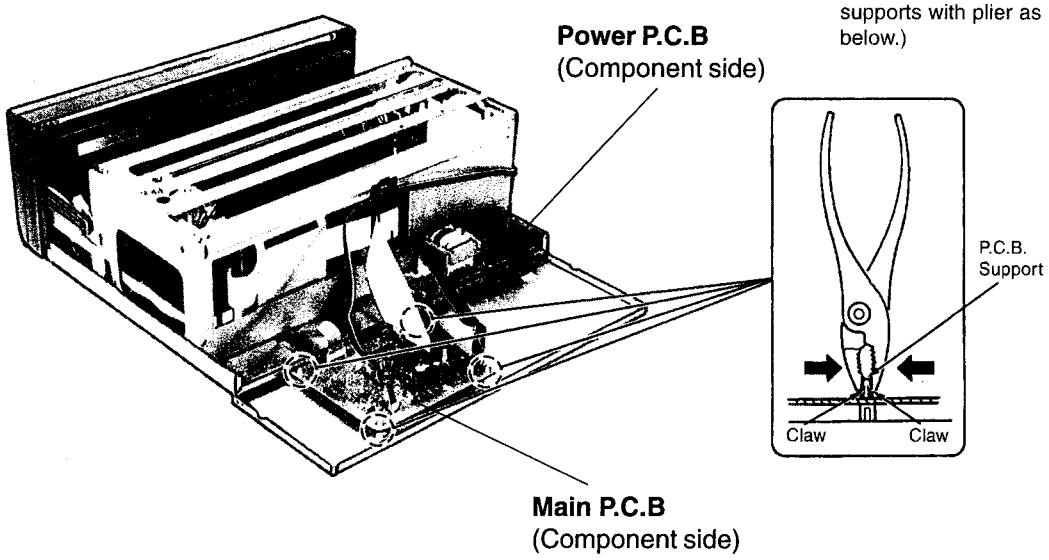
Step 8

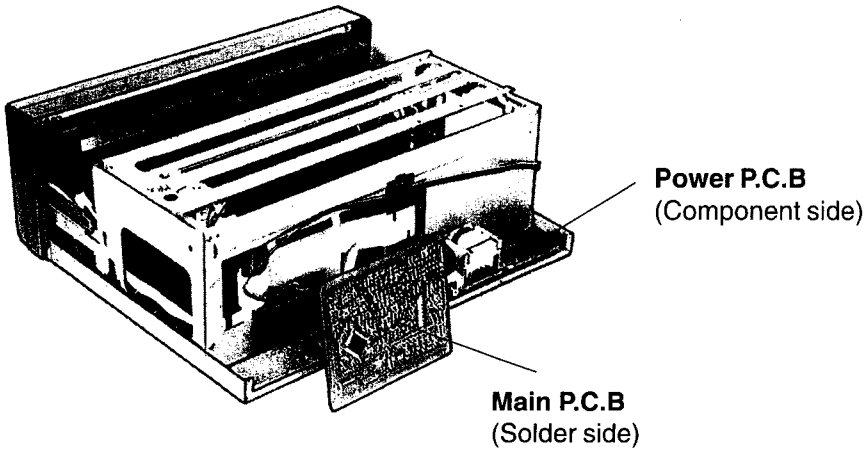
Remove the rear panel ass'y by releasing both the side stays, check the Front panel PCB and Led PCBs.

2. Checking Procedure For Main P.C.B. and Power P.C.B.

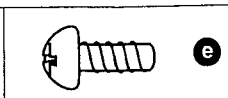


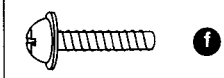






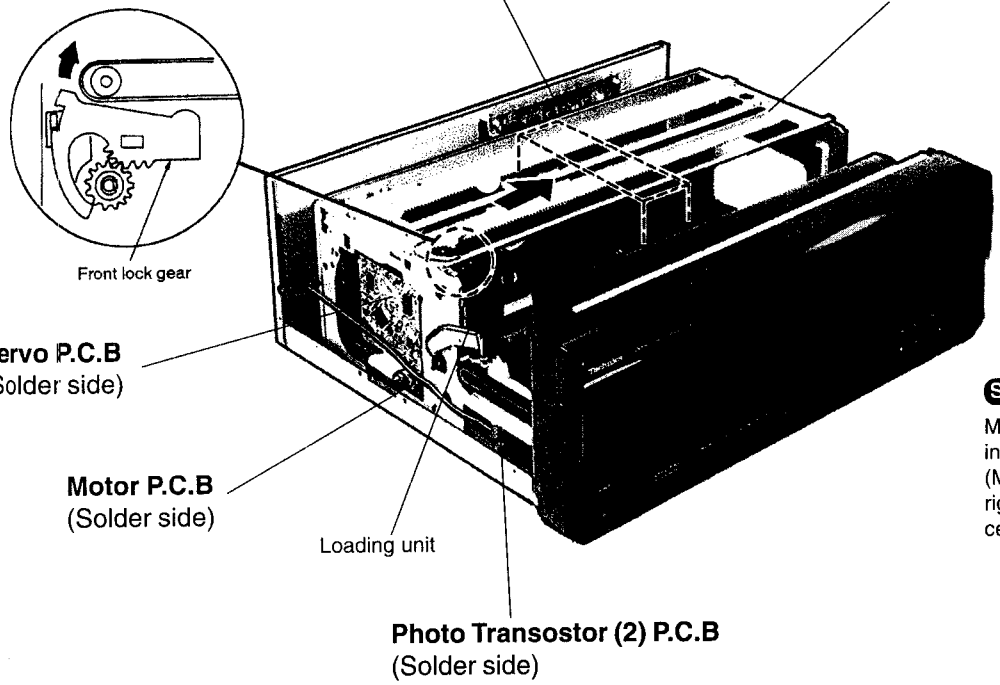
3. Checking Procedure For Servo P.C.B.





Step 12

Unlock the loading unit by moving the front lock gear manually in the direction of arrow.

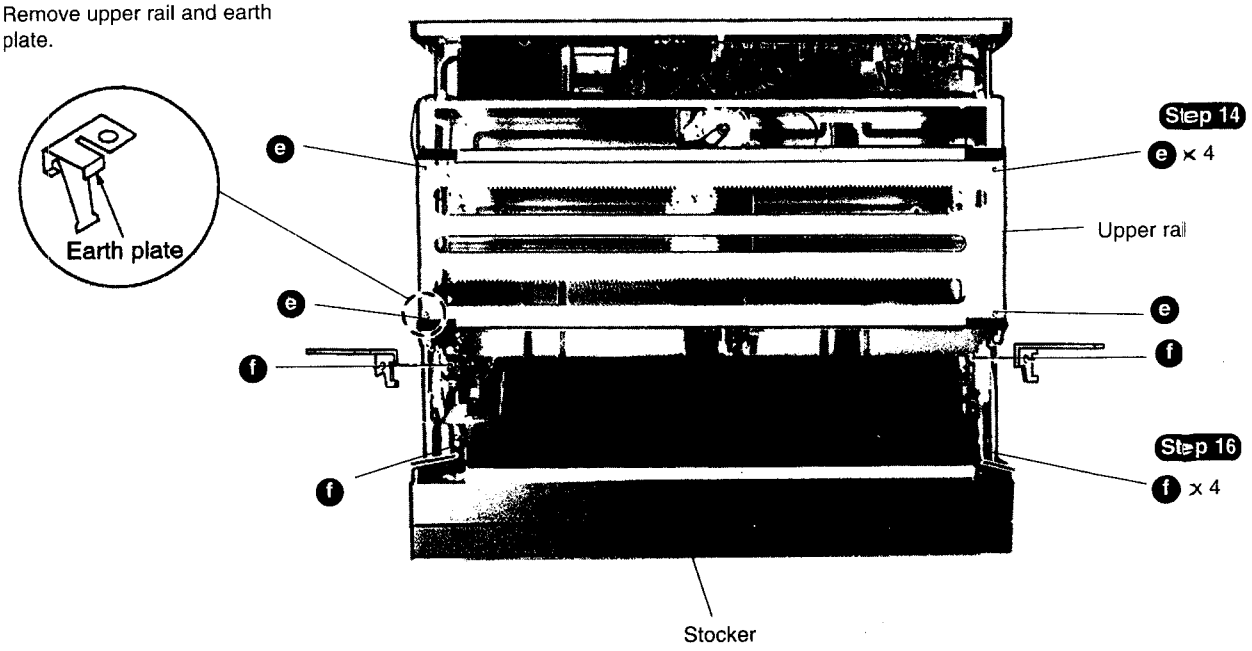


Step 13

Move the loading unit manually in the right direction.
(Move the loading unit to the right direction beyond the center of the frame.)

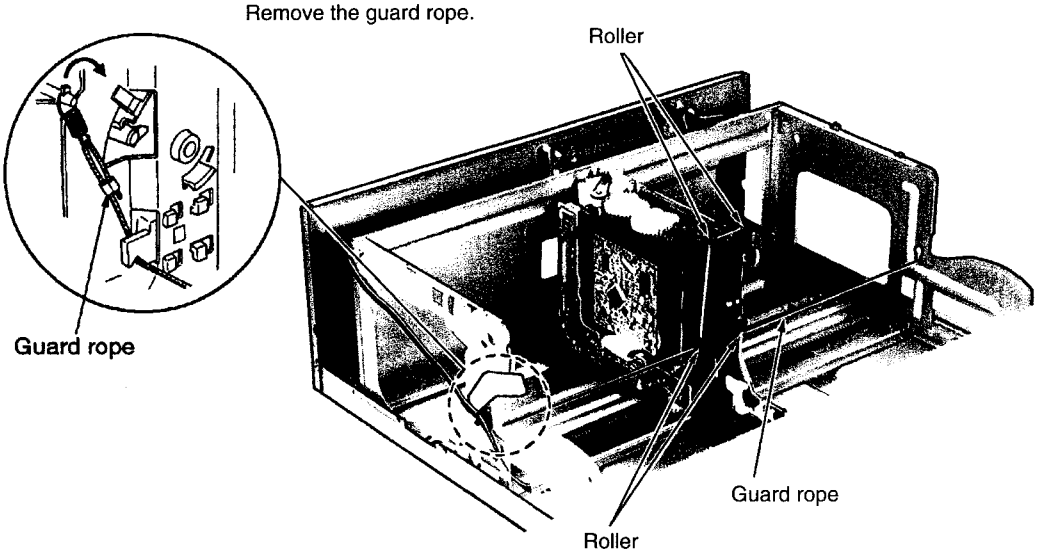
Step 15

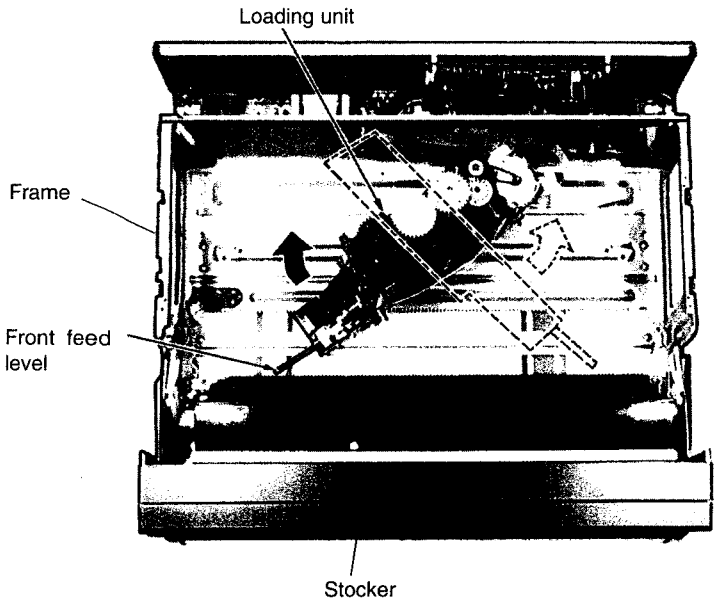
Remove upper rail and earth plate.



Step 17

Remove the guard rope.

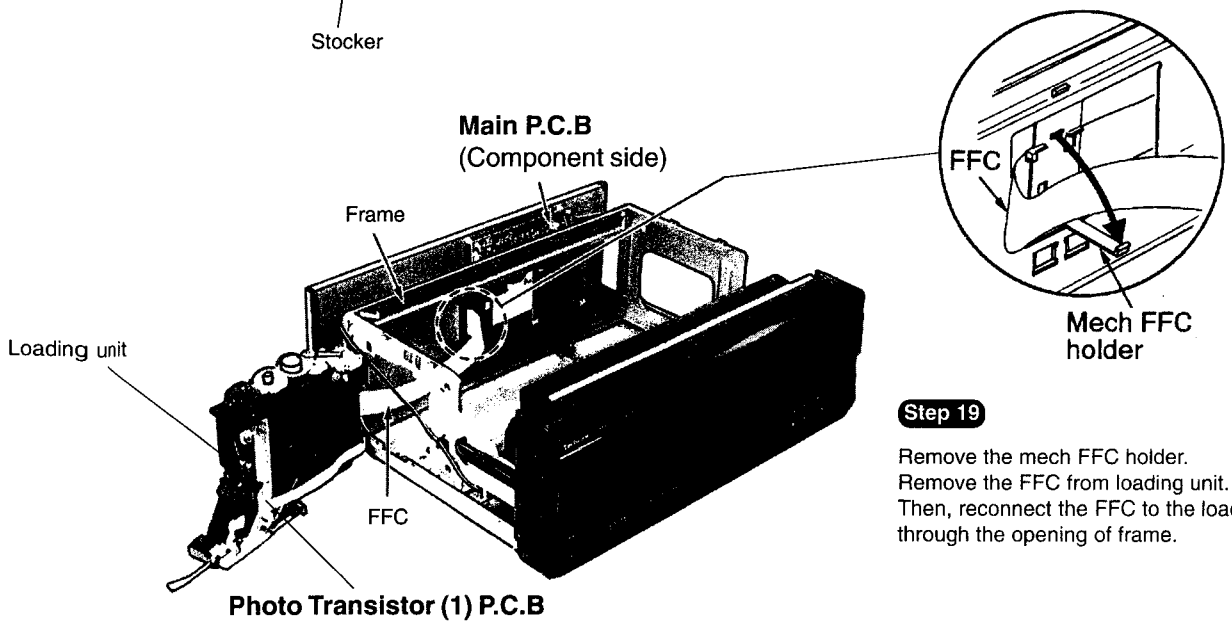




Step 18

Rotate the loading unit to clockwise or counterclockwise with lifting the stocker and then, slide the front feed lever under the stocker.
Remove the loading unit from frame.

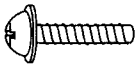
Note :
(When reassembling the loading unit, make sure to avoid the front feed lever from the stocker and then, install the loading unit because the front feed lever is positioned under stocker.)



Step 19

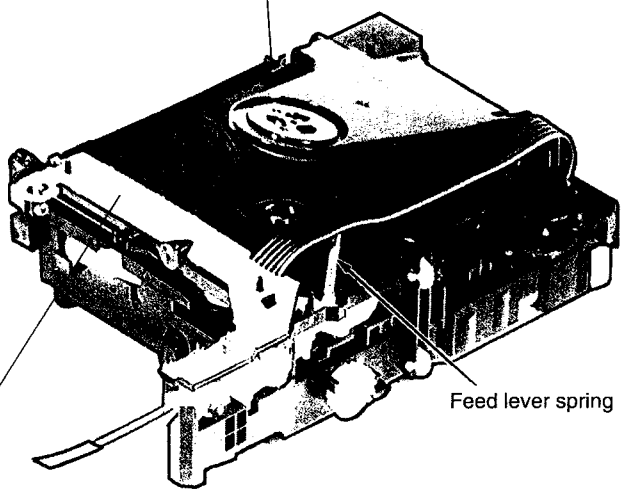
Remove the mech FFC holder.
Remove the FFC from loading unit.
Then, reconnect the FFC to the loading unit through the opening of frame.

[XTB26+12J]



[XTWS3+10T]

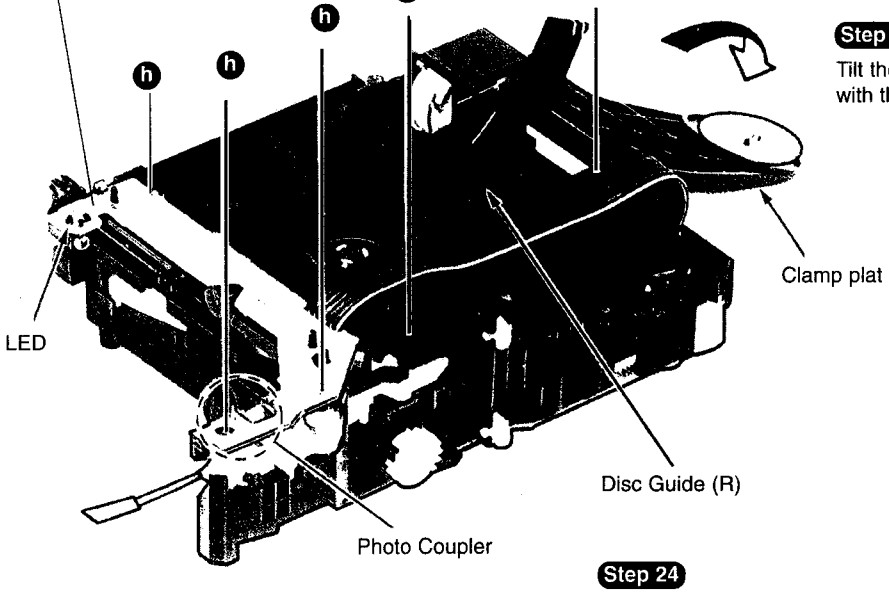
Step 20
Remove g screw



Step 21
Remove the feed lever spring.

Photo Transistor (1) P.C.B
(Solder side)

Step 23
h x 5

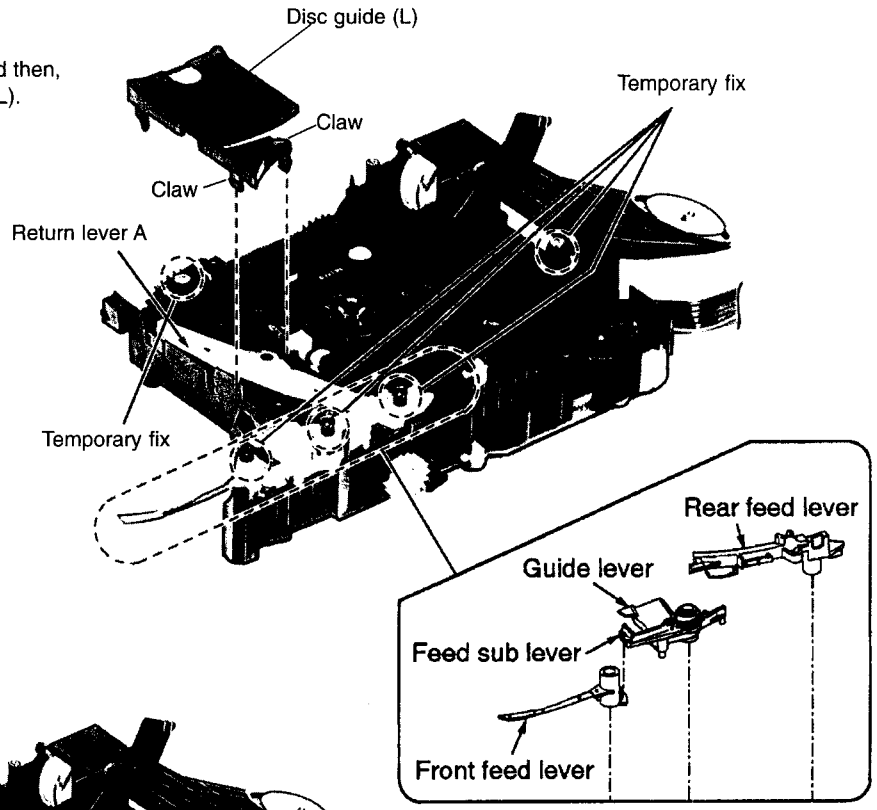


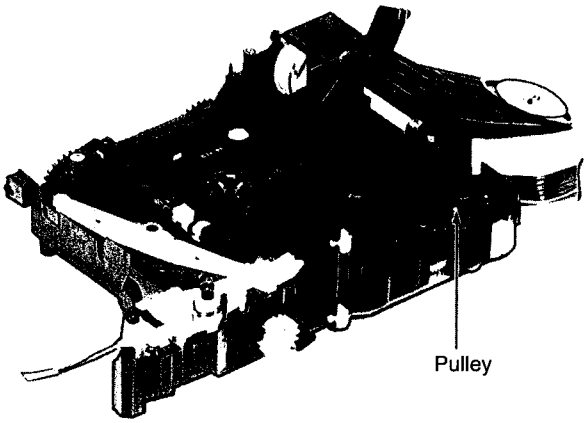
Step 22
Tilt the clamp plate backward with the direction of arrow.

Step 24
Remove the disc guide (R).

Step 24

Release the 2 claws and then, remove the disc guide (L).

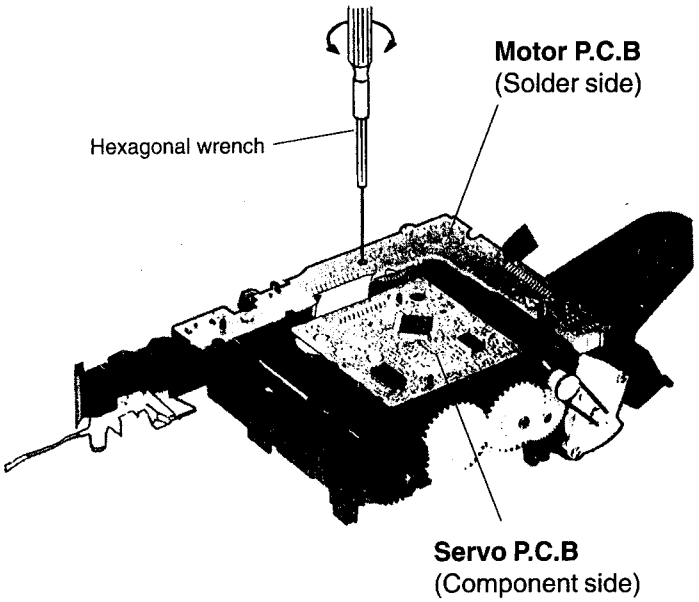


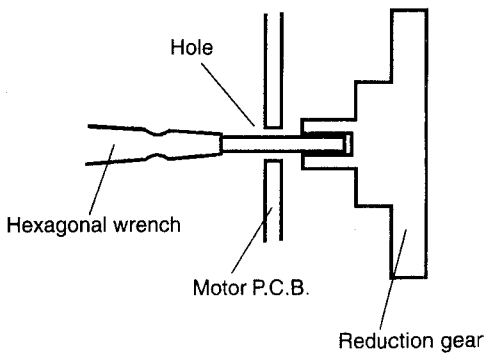


Step 25

In case of confirmation manually, rotate the pulley as shown left.
Rotate clockwise : Loading operation.
Rotate counterclockwise : Unloading operation

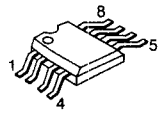
Or ratate with 2 mm hexagonal wrench.
Rotate clockwise : Unloading operation.
Rotate counterclockwise : Loading operation



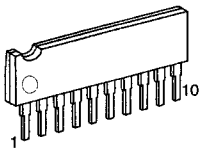


■ Type Illustration of ICs, Transistors and Diodes

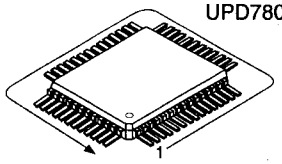
BA4558FDXE2
AT24C64



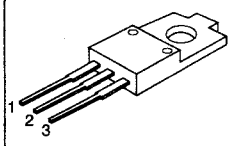
BA6247N



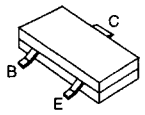
UPD78043F045 (100Pin)
MN662741RPA (80Pin)
UPD780T6G036 (80Pin)



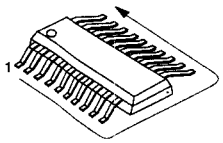
BA05T



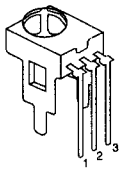
DTC114YKA146
2SA1037AKSTX



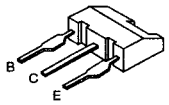
AN8837SBE1
AN8780NSBE2



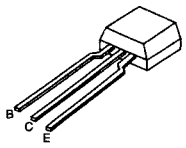
RCDGP1U28XD



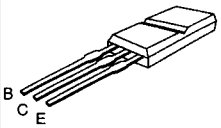
2SB1238QRTV2
2SB1320AQRTA
2SD1862QTV2



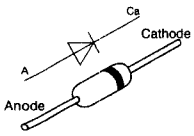
RVTDTC114YST
RVTDTA114TST
RVTDTA114YST
RVTDTC124EST
RVTDTA124EST
2SC3311AIQST
2SD1450STA
2SC2785FETA



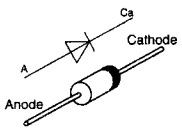
2SD2136PQRTA

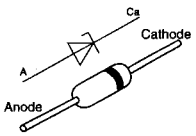


RVD1SS133TA
1SS291TA
MA165TA



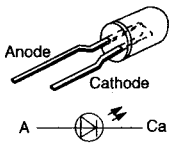
RL1N4003N02



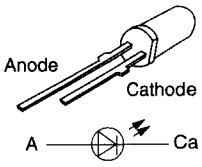


MTZJ9R1BTA
MTZJ6R2CTA
MTZJ5R1BTA
MTZJ7R5CTA
MTZJ3R0BTA
MTZJ36ATA

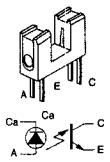
BR3433S
LNG995PFB0A1



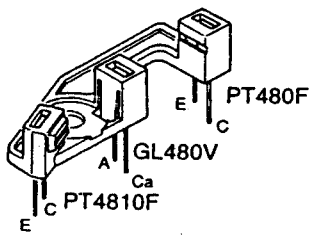
LN66S



RSQGP1S53V



GL480V
PT480F
PT4810F



■ Terminal Function Of IC's

• IC703 (AN8780NSBE2) : Focus Coil / Tracking Coil / Traverse Motor / Spindle Motor Drive

Pin No.	Mark	I/O	Function
1	/RST	-	Not used, open
2	NC	-	Not used
3	IN2	I	Motor driver (2) input
4	PC2	I	Turntable motor drive signal ("L": ON)
5	NC	-	Not used
6	IN1	I	Motor driver (1) input
7	PVcc1	I	Driver power supply terminal (1)
8	PGND1	-	Driver GND terminal (1)
9	NC	-	Not used, connected to GND
10	D1-	O	Motor driver (1) output terminal (-)
11	D1+	O	Motor driver (1) output terminal (+)
12	D2-	O	Motor driver (2) output terminal (-)
13	D2+	O	Motor driver (2) output terminal (+)
14	D3-	O	Motor driver (3) output terminal (-)

Pin No.	Mark	I/O	Function
15	D3+	O	Motor driver (3) output terminal (+)
16	D4-	O	Motor driver (4) output terminal (-)
17	D4+	O	Motor driver (4) output terminal (+)
18	NC	-	Not used, open
19	PGND2	-	Driver GND terminal (2)
20	PVcc2	I	Driver power supply (2)
21	VCC	I	Power supply terminal
22	VREF	I	Reference voltage input terminal
23	IN4	I	Motor driver (4) input
24	IN3	I	Motor driver (3) input
25	RSTIN	I	Reset terminal (Not used, connected to GND)
26	NC	-	Not used, connected to GND

• IC701 (AN8837SBE1): Servo Amp.

Pin No.	Mark	I/O	Function
1	PDE	I	Tracking signal input terminal 1 (E ch)
2	PDF	I	Tracking signal input terminal 2 (E ch)
3	VCC	I	Power supply terminal
4	PDA	I	Focus signal input terminal 1 (A ch)
5	PDB	I	Focus signal input terminal 2 (B ch)
6	LPD	I	Laser PD signal
7	LD	O	Laser power auto control output
8	RF	O	RF amp terminal
9	RFIN	I	AGC input terminal
10	CSBRT	I	OFTR capacitor connection terminal
11	CEA	I	HPF-AMP capacitor connection terminal
12	BDO	O	Dropout detection control
13	LDON	I	LD APC ON/OFF ("H": ON, "L": OFF)
14	GND	-	GND terminal

Pin No.	Mark	I/O	Function
15	/RFDET	O	RF det. signal output terminal ("L": det.)
16	CROSS	O	Tracking error zero cross output
17	OFTR	O	Off track detection ("H": det.)
18	VDET	O	Oscillation det. signal ("H": det.)
19	ENV	O	Envelope signal output terminal
20	ENVOFF	I	Not used, connected to power supply
21	TEBPF	O	Oscillation detect input terminal
22	TEN	I	Tracking error signal
23	TEOUT	O	Tracking error signal
24	FEOUT	O	Focus error signal
25	FEN	I	Focusing error signal
26	VREF	O	Reference voltage output terminal
27	TBAL	I	Tracking balance adj. input
28	FBAL	I	Focus balance adj. input

• IC702 (MN662741RPA): Servo Processor / Digital Signal Processor / Digital Filter / D/A Converter

Pin No.	Mark	I/O	Function
1	BCLK	O	Serial bit clock output
2	LRCK	O	L/R discriminating signal output
3	SRDATA	O	Serial data
4	$DV_{DD}1$	I	Power supply (digital circuit) terminal
5	$DV_{SS}1$	-	GND (digital circuit) terminal
6	TX	O	Digital audio interface signal
7	MCLK	I	Command clock signal
8	MDATA	I	Command data signal
9	MLD	I	Command load signal ("L": LOAD)
10	SENSE	O	Sense signal output (OFT, FESL, NACEND, NAJEND, POSAD, SFG) (Not used, open)
11	/FLOCK	O	Optical servo condition (focus) ("L": Lead-in) (Not used, open)
12	/TLOCK	O	Optical servo condition (tracking) ("L": Lead-in) (Not used, open)
13	BLKCK	O	Sub-code block clock (f =75Hz)
14	SQCK	I	Sub-code Q register clock
15	SUBQ	O	Sub-code Q data
16	DMUTE	-	Muting input ("H": Mute) (Not used, connected to GND)
17	STAT	O	Status signal (CRC, CUE,CLVS,TTSTOPFCLV,SQCK)
18	/RST	I	Reset signal ("L": reset)
19	SMCK	-	System clock (f=4.2336 MHz) (Not used,open)
20	PMCK	-	Frequency division clock signal (f=1/192 Crystal OSC (16.9344 MHz) = 88.2 KHz) (Not used, open)
21	TRV	O	Traverse servo control
22	TVD	O	Traverse drive signal
23	PC	O	Turntable motor drive signal ("L": ON)
24	ECM	O	Turntable motor drive signal (Forced mode)
25	ECS	O	Turntable motor drive signal (Servo error signal)

Pin No.	Mark	I/O	Function
26	KICK	O	Kick pulse output
27	TRD	O	Tracking drive signal output
28	FOD	O	Focus drive signal output
29	VREF	I	D/A drive output (TVD, ECS, TRD,FOD,FBAL, TBAL) normal voltage input terminal
30	FBAL	O	Focus balance adjustment output
31	TBAL	O	Tracking balance adjustment output
32	FE	I	Focus error signal (analog input)
33	TE	I	Tracking error signal (analog input)
34	RFENV	I	RF envelope signal
35	VDET	I	Oscillation detection signal ("H": detection)
36	OFT	I	Off track signal ("H": off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal ("L": detection)
39	BDO	I	Dropout detection signal input ("H": dropout)
40	LDON	O	Laser power control ("H": ON)
41	TES	O	Tracking error shunt output ("H":dropout)
42	PLAY	O	Play signal ("H": play) (Not used, open)
43	WVEL	O	Double velocity status signal ("H": Double) (Not used, open)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias terminal (Not used, open)
47	DSLF	I/O	DSL loop filter terminal
48	PLLF	I/O	PLL loop filter terminal
49	VCOF	I/O	VCO loop filter terminal
50	$AV_{DD}2$	I	Power supply (analog circuit) terminal 2
51	$AV_{SS}2$	-	GND (analog circuit) terminal
52	EFM	O	EFM signal (Not used, open)
53	PCK	O	PLL extract clock (f=4.3218MHz) (Not used, open)
54	PDO	O	Phase compared signal of EFM and PCK (Not used, open)

Pin No.	Mark	I/O	Function
55	SUBC	O	Sub-code serial output clock
56	SBCK	I	Sub-code serial input data
57	VSS	-	GND terminal
58	X1	I	Crystal oscillator terminal (f=16.9344MHz)
59	X2	O	Crystal oscillator terminal (f=16.9344MHz)
60	VDD	I	Power supply terminal
61	BYTCK	O	Byte clock signal (Not used, open)
62	/CLDCK	O	Subcode frame clock signal (f=CLDCK=7.35KHz: Normal)
63	FCLK	O	Crystal frame clock (Not used, open)
64	IPFLAG	O	Interpolation flag terminal
65	FLAG	O	Flag terminal (Not used, open)
66	CLVS	O	Turntable servo phase synchro signal ("H": CLV, "L": Rough servo) (Not used, open)
67	CRC	O	Sub-code CRC check terminal ("H": OK, "L": NG) (Not used, open)
68	DEMPH	O	De-emphasis ON signal ("H": ON) (Not used, open)
69	RESY	O	Re-synchoronizing signal of frame sync. (Not used, open)

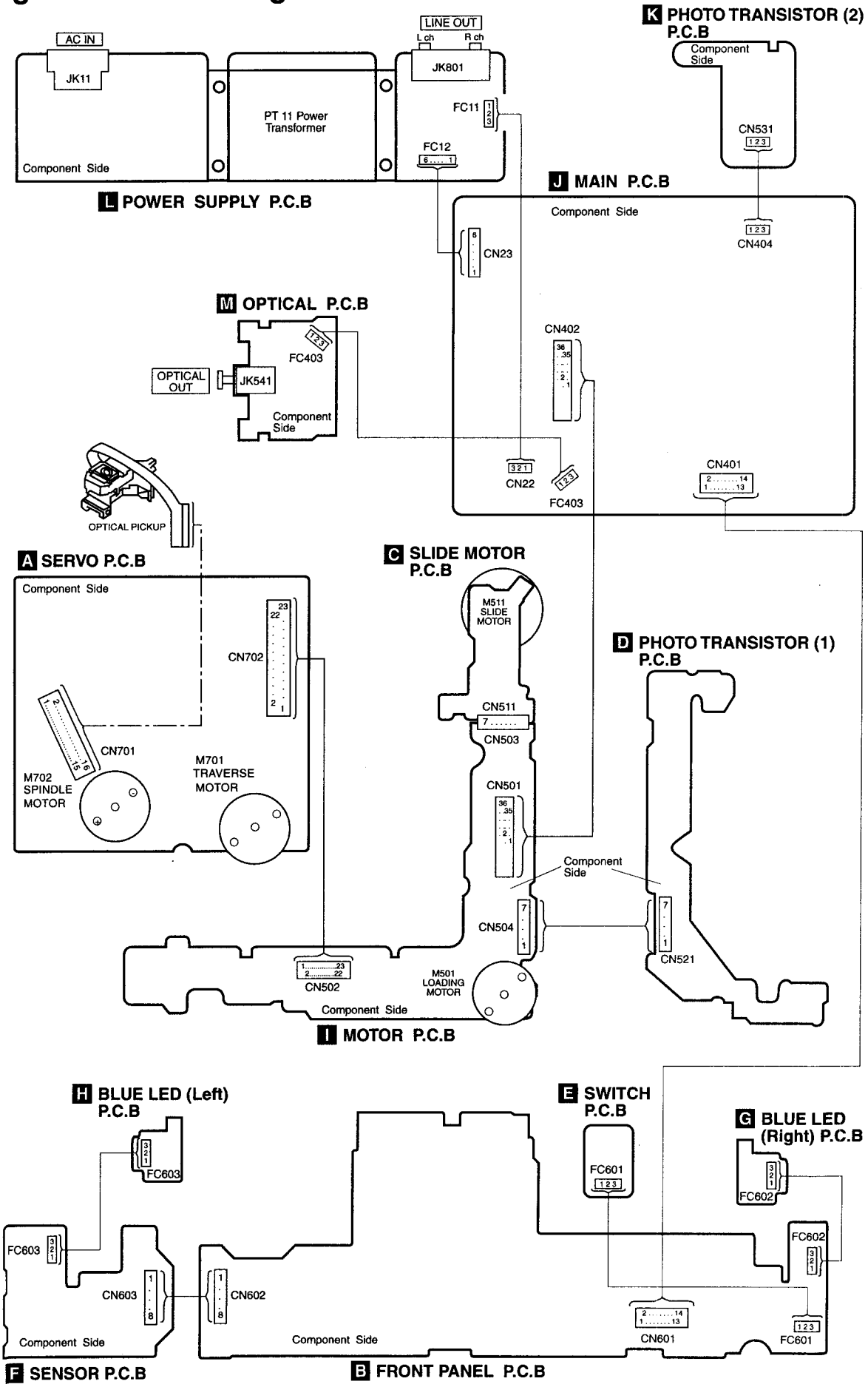
Pin No.	Mark	I/O	Function
70	/RST2	I	Reset terminal after "MASH" circuit (Not used, connected to GND)
71	/TEST	I	Test terminal (Normal : "H") (Not used, connected to power supply)
72	AVDD1	I	Power supply (analog circuit) termianl (1)
73	OUTL	O	Lch audio signal
74	AVSS1	I	GND (analog circuit) terminal (1)
75	OUTR	O	Rch audio signal
76	RSEL	I	Polarity direction, control terminal of RF signal (Not used, connected to power supply)
77	CSEL	I	Frequency control terminal of crystal oscillator (Not used, connected to GND)
78	SRDATA	I	Serial data input
79	LRCK	I	"L" ch/ R ch clock signal input
80	BCLK	I	Audio bit clock input

• IC401 (UPD78043F045) Micro Computer

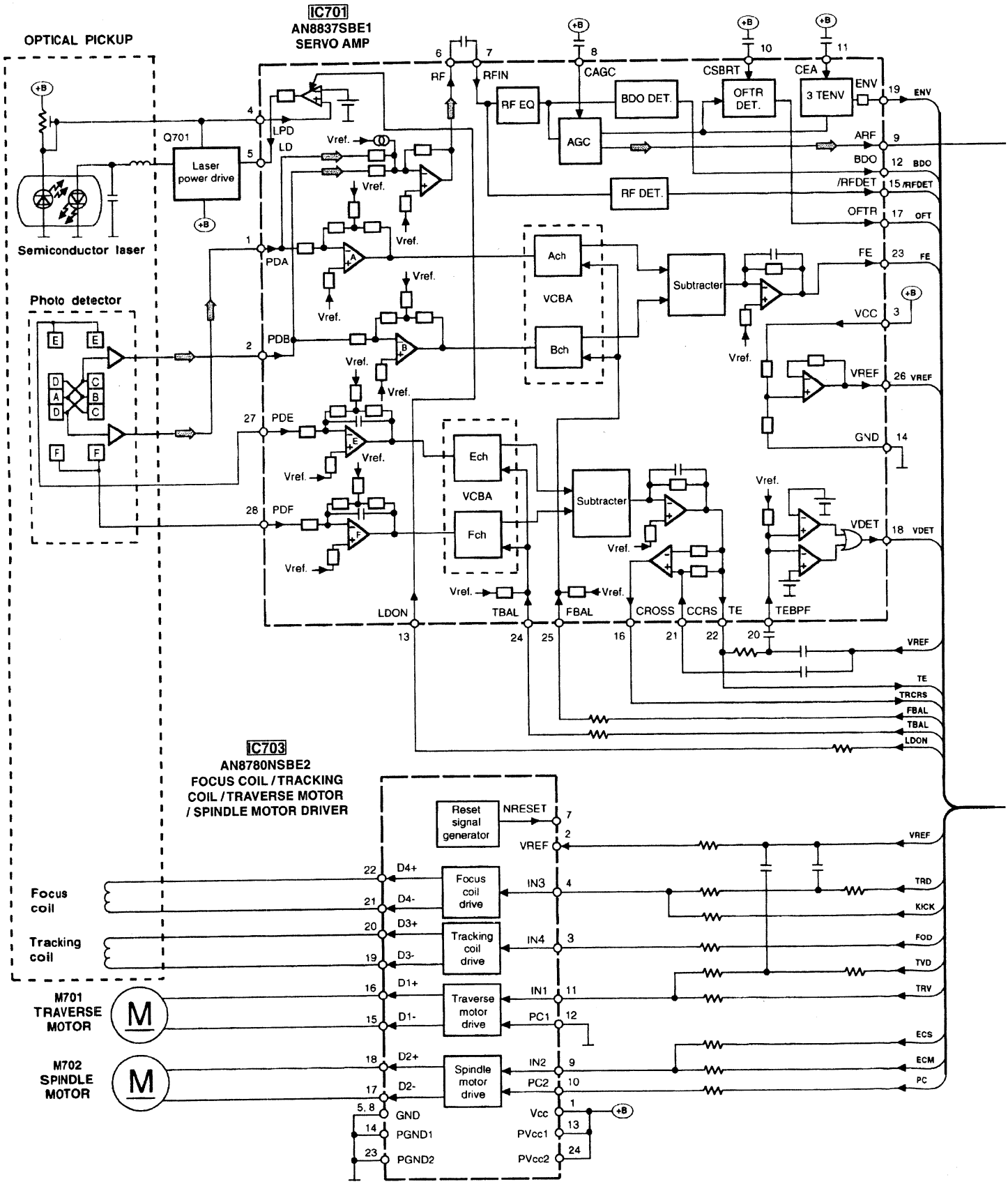
Pin No.	Mark	I/O	Function
1~7	VSS	-	Connected to GND
8	VDD	I	Power supply terminal
9	SBCK	I	Sub-code serial input data
10	NC	-	Not connected
11	SUBC	I	Sub-code serial input clock
12	OPCS	O	Chip select terminal
13	DMUTE	O	Muting control signal
14	SQCK	O	Sub-code Q register clock
15	NC	–	Not connected
16	SUBQ	I	Sub-code Q data
17	/RESET	O	Reset signal output
18	OPREQ2	O	Request signal 2 output
19	OPDTIO	I/O	Data signal input/output
20	AVSS	–	GND terminal
21	OPCLK	O	Clock signal output
22	OPREQ1	O	Request signal 1 output
23	DIR	O	Motor control signal
24	SLIDE	O	Motor control signal
25	LOAD	O	Motor control signal
26	RSTSV	O	Reset signal output
27	MODEL	I	Connect to GND
28	VSS	I	Connect to GND
29	AVDD	I	Power supply terminal
30	AVREF	I	Power supply terminal (Not used, connected to GND)
31	XT1	–	Not used, connected to GND
32	XT2	–	Not used, open
33	VSS	–	GND terminal
34	X1	I	Crystal Osc terminal (F=4.2336MHz)
35	X2	O	Crystal Osc terminal (F=4.2336 MHz)
36	MCLK	O	Command clock signal

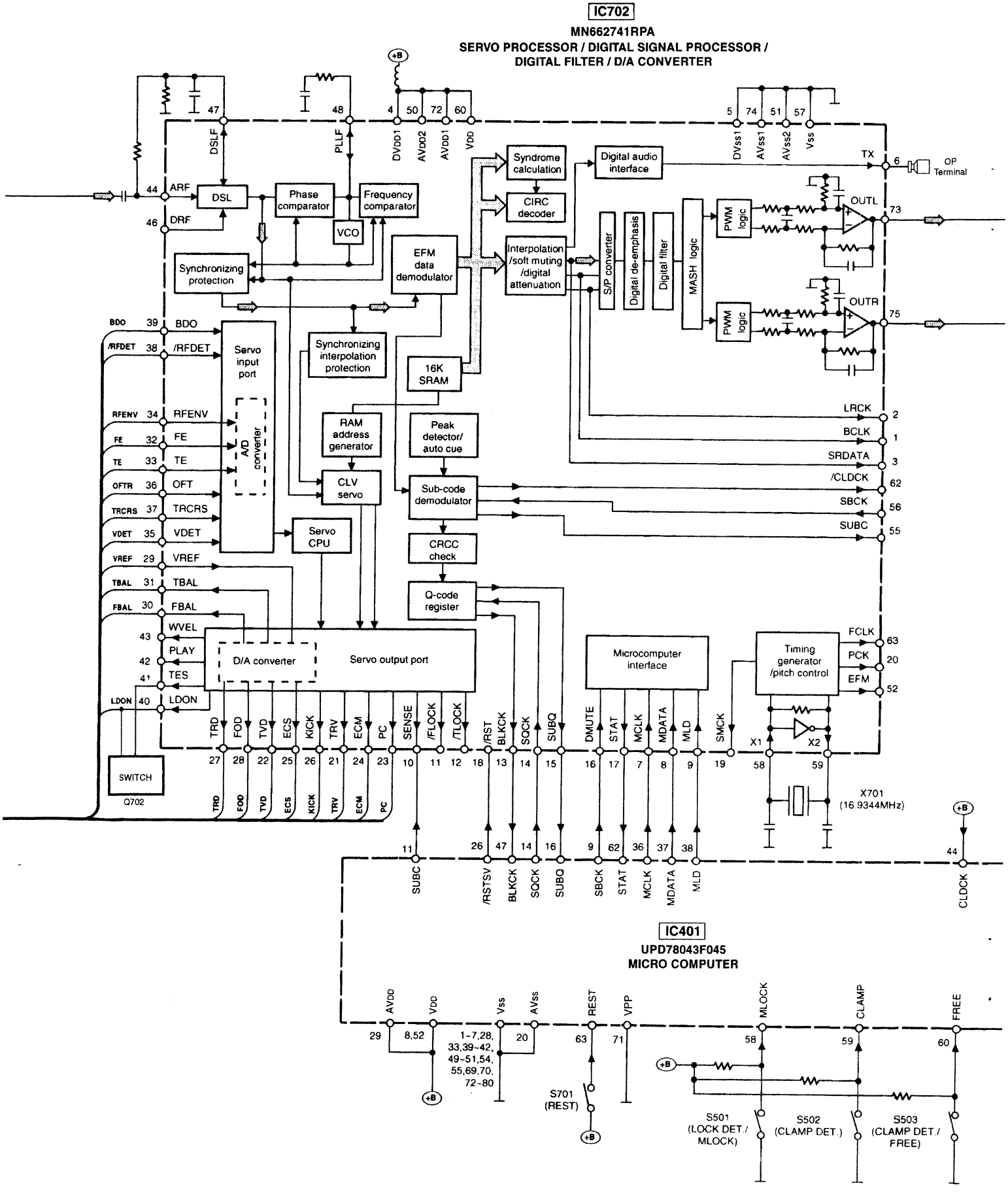
Pin No.	Mark	I/O	Function
37	MDATA	O	Command data signal
38	MLD	O	Command load signal ("L" LOAD)
39~42	VSS	-	connected to GND
43	PWN	O	Motor control signal
44	CLDCK	I	LD power det. terminal
45	POSITION	I	Rotary tray position det. terminal
46	SPEED	I	Loading motor speed sensor signal
47	BLKCK	I	sub-code block clock
48	IC	-	Not used, connected to GND
49~51	VSS	-	Connected to GND
52	VDD	I	Power supply terminal
53	POWER	O	Power ON/OFF output terminal
54~55	VSS	-	Connected to GND
56	SINGLE	I	Disc slot det. terminal for single play
57	DISC	I	Disc control signal
58	MLOCK	I	Mechanism det. terminal (S501)
59	CLAMP	I	Mechanism det. terminal (S502)
60	FREE	I	Mechanism det. terminal (S503)
61	PHSEL1	-	Connected to GND
62	STAT	I	Status signal (CRC, CUE, CLVS, TTSTOP, FCLV, QCK
63	REST	I	Rest position det.
64	PHSEL2	-	Connected to GND
65	TEST1	-	Not used, connected to GND
66	TEST2	-	Not used, connected to GND
67	MOSEL	-	Connected to GND
68	LED3	O	Disc det. signal
69~70	VSS	I	Connected to GND
71	VPP	I	Power supply terminal (Not used, connected to GND)
72~80	VSS	I	Connected to GND

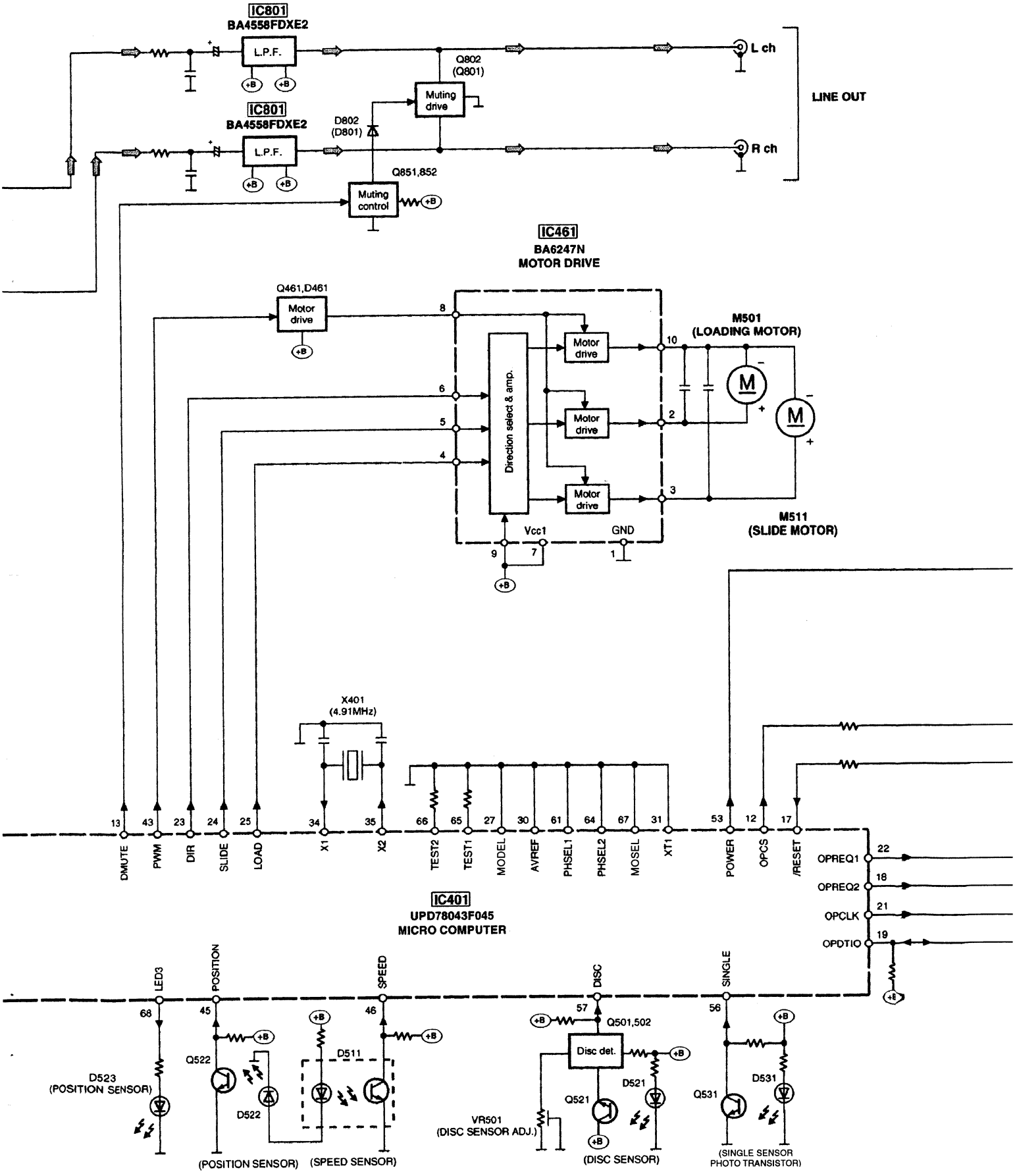
■ Wiring Connection Diagram

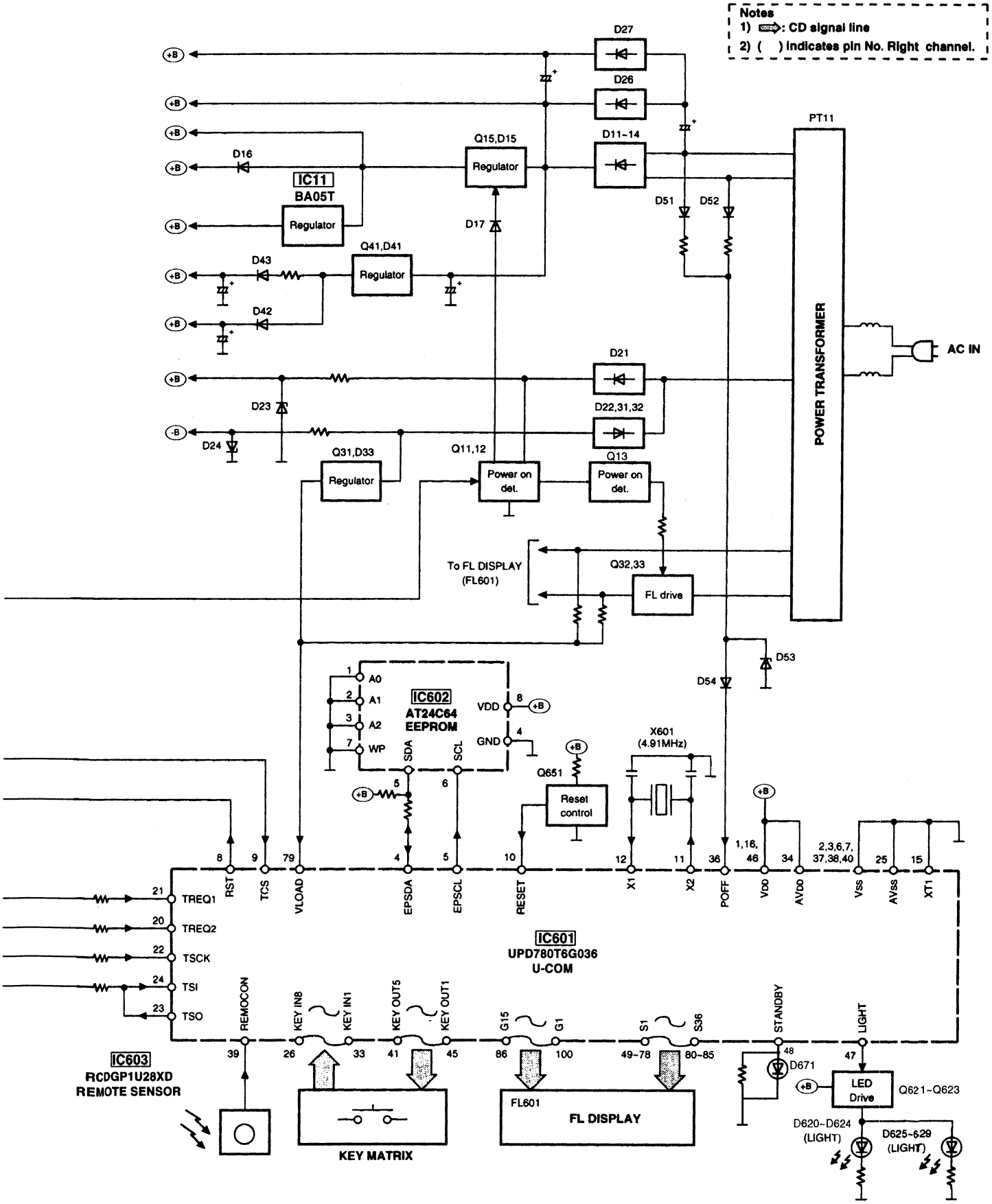


Block Diagram

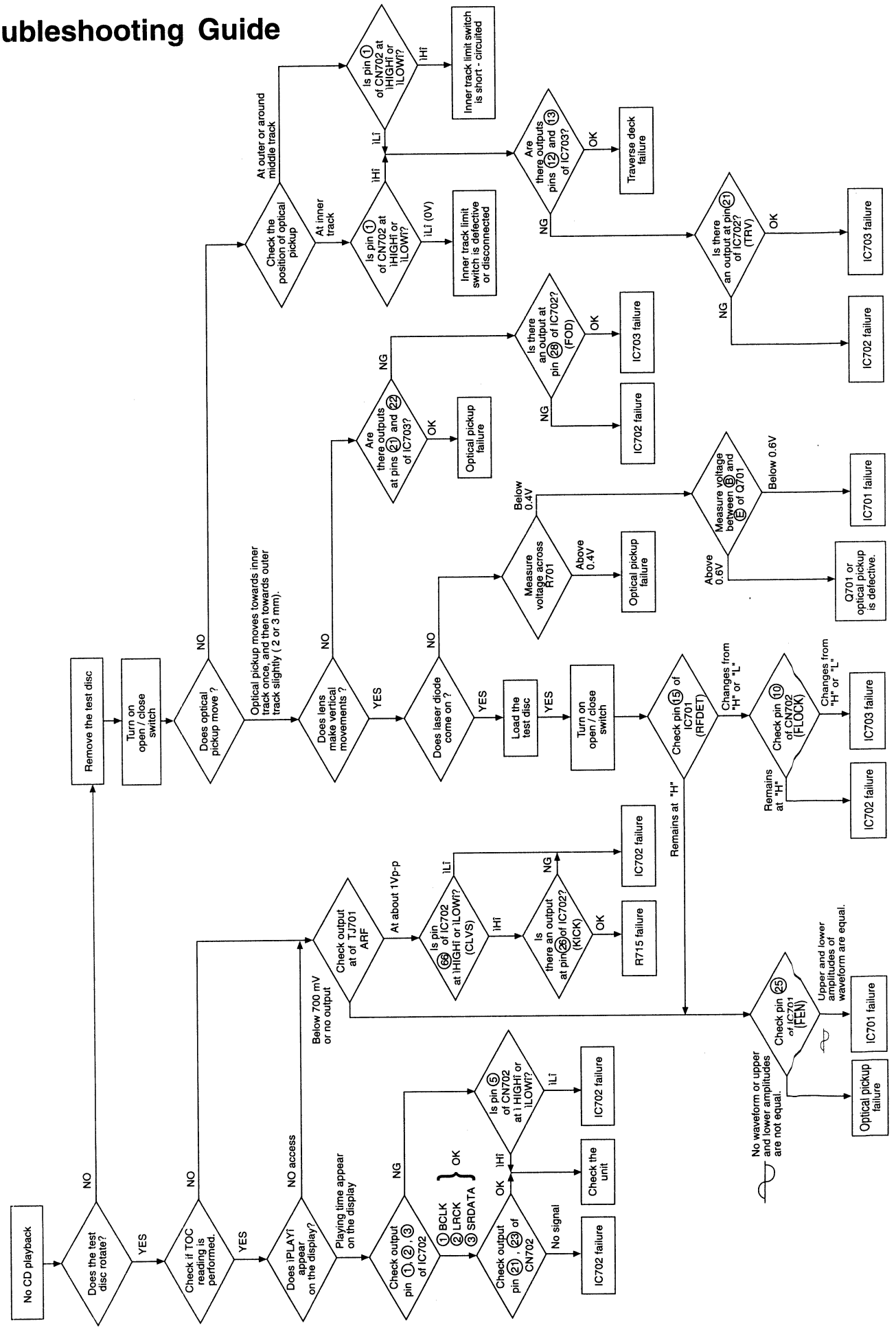



IC702
MN662741RPA
SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR /
DIGITAL FILTER / D/A CONVERTER
+B
47
48
4
50
72
60
5
74
51
57
DSLF
PLLF
DVDD1
AVDD2
AVDD1
VDD
DVSS1
AVSS1
AVSS2
VSS
Syndrome calculation
Digital audio interface
TX
6
OP Terminal
CIRC decoder
Interpolation /soft muting /digital attenuation
S/P converter
Digital de-emphasis
Digital filter
MASH logic
PWM logic
OUTL
73
OUTR
75
44
ARF
DSL
Phase comparator
Frequency comparator
46
DRF
VCO
Synchronizing protection
EFM data demodulator
Synchronizing interpolation protection
16K SRAM
BDO 39
/RFDET 38
Servo input port
RFENV 34
FE 32
TE 33
OFTR 36
TRCRS 37
VDET 35
VREF 29
TBAL 31
FBAL 30
A/D converter
RAM address generator
Peak detector/ auto cue
CLV servo
Sub-code demodulator
CRCC check
Q-code register
Servo CPU
LRCK 2
BCLK 1
SRDATA 3
/CLDCK 62
SBCK 56
SUBC 55
WVEL 43
PLAY 42
TES 41
LDON 40
D/A converter
Servo output port
Microcomputer interface
Timing generator /pitch control
FCLK 63
PCK 20
EFM 52
TRD 27
FOD 28
TVD 22
ECS 25
KICK 26
TRV 21
ECM 24
PC 23
SENSE 10
/FLOCK 11
/TLOCK 12
/RST 18
BLKCK 13
SQCK 14
SUBQ 15
DMUTE 16
STAT 17
MCLK 7
MDATA 8
MLD 9
SMCK 19
X1 58
X2 59
X701 (16.9344MHz)
SWITCH
Q702
11
26
47
14
16
9
62
36
37
38
44
SUBC
/RSTSV
BLKCK
SQCK
SUBQ
SBCK
STAT
MCLK
MDATA
MLD
CLDCK
IC401
UPD78043F045
MICRO COMPUTER
AVDD 29
VDD 8,52
VSS 1~7,28, 33,39~42, 49~51,54, 55,69,70, 72~80
AVSS 20
REST 63
VPP 71
MLOCK 58
CLAMP 59
FREE 60
S701 (REST)
S501 (LOCK DET./ MLOCK)
S502 (CLAMP DET.)
S503 (CLAMP DET./ FREE)


IC801
BA4558FDXE2
L.P.F.
+B
Q802
(Q801)
Muting drive
L ch
LINE OUT
IC801
BA4558FDXE2
D802
(D801)
L.P.F.
R ch
Q851,852
Muting control
IC461
BA6247N
MOTOR DRIVE
Q461,D461
Motor drive
M501
(LOADING MOTOR)
Direction select & amp.
Motor drive
M511
(SLIDE MOTOR)
Vcc1
GND
X401
(4.91MHz)
DMUTE
PWM
DIR
SLIDE
LOAD
X1
X2
TEST2
TEST1
MODEL
AVREF
PHSEL1
PHSEL2
MOSEL
XT1
POWER
OPCS
/RESET
OPREQ1
OPREQ2
OPCLK
OPDTIO
IC401
UPD78043F045
MICRO COMPUTER
LED3
POSITION
SPEED
DISC
SINGLE
D523
(POSITION SENSOR)
Q522
D522
D511
(POSITION SENSOR)
(SPEED SENSOR)
Q501,502
Disc det.
D521
Q521
VR501
(DISC SENSOR ADJ.)
(DISC SENSOR)
D531
Q531
(SINGLE SENSOR
PHOTO TRANSISTOR)


Notes
1) ⇒: CD signal line
2) ( ) Indicates pin No. Right channel.
D27
D26
D11~14
PT11
Q15,D15
Regulator
D16
IC11
BA05T
Regulator
D17
D51
D52
Q41,D41
Regulator
D43
D42
AC IN
POWER TRANSFORMER
D21
D23
D22,31,32
D24
Q31,D33
Regulator
Q11,12
Power on det.
Q13
Power on det.
To FL DISPLAY (FL601)
Q32,33
FL drive
D53
D54
IC602
AT24C64
EEPROM
A0
A1
A2
WP
SDA
SCL
VDD
GND
X601
(4.91MHz)
Q651
Reset control
TREQ1
TREQ2
TSCK
TSI
TSO
RST
TCS
VLOAD
EPSDA
EPSCL
RESET
X1
X2
POFF
VDD
AVDD
VSS
AVSS
XT1
IC601
UPD780T6G036
U-COM
REMOCON
KEY IN8
KEY IN1
KEY OUT5
KEY OUT1
G15
G1
S1
S36
STANDBY
LIGHT
IC603
RCDGP1U28XD
REMOTE SENSOR
KEY MATRIX
FL601
FL DISPLAY
D671
LED Drive
Q621~Q623
D620~D624
(LIGHT)
D625~629
(LIGHT)

■ Troubleshooting Guide



Schematic Diagram

		Page
A	CD SERVO CIRCUIT	38 ~ 39
B	FRONT PANEL CIRCUIT	36 ~ 37
C	SLIDE MOTOR CIRCUIT	33
D	PHOTO TRANSISTOR(1) CIRCUIT	33
E	SWITCH CIRCUIT	37
F	SENSOR CIRCUIT	37
G	BLUE LED (Right) CIRCUIT	37
H	BLUE LED (Left) CIRCUIT	37
I	MOTOR CIRCUIT	33
J	MAIN CIRCUIT	34 ~ 35
K	PHOTO TRANSISTOR(2) CIRCUIT	35
L	POWER SUPPLY CIRCUIT	33
M	OPTICAL CIRCUIT	33

(All schematic diagrams may be modified at any time with the development of new technology)

Note :

- S501 : Lock det. switch (MLOCK)
- S502 : Clamp det. switch (CLAMP)
- S503 : Clamp det. switch (FREE)
- S601 : Single play (SINGLE ►) switch
- S602 : ID scan switch
- S603 : Random Mode switch
- S604 : Programing (PROGRAM) switch
- S605 : Numeric / Character select switch 1
- S606 : Numeric / Character select switch 2
- S607 : Numeric / Character select switch 3
- S608 : Numeric / Character select switch 4
- S609 : Numeric / Character select switch 5
- S610 : Numeric / Character select switch 6
- S611 : Numeric / Character select switch 7
- S612 : Numeric / Character select switch 8
- S613 : Numeric / Character select switch 9
- S614 : DISC / CAPS select switch
- S615 : Numeric / Character select switch 0
- S616 : Numeric / Character select switch >=10
- S617 : Text edit (TEXT EDIT) switch
- S618 : Text mode (TEST MODE) switch
- S619 : Text/Character Search down switch
- S620 : Text/Character Search up switch
- S621 : Disc enter (DISC ENTER) switch
- S622 : Disc skip (-)
- S623 : Disc skip (+)
- S624 : Search character <<
- S625 : Search character >>
- S626 : Stop (■) switch
- S627 : Pause (❚❚) switch
- S628 : Skip/Cursor I<<
- S629 : Skip/Cursor >>I
- S630 : Play switch
- S631 : Power switch
- S632 : CD open/close switch
- S701 : Rest detection switch

- **Signal line**

——— : +B Line - - - - : - B Line ⇨ : CD Signal Line

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis.
  Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No Mark : CD stop

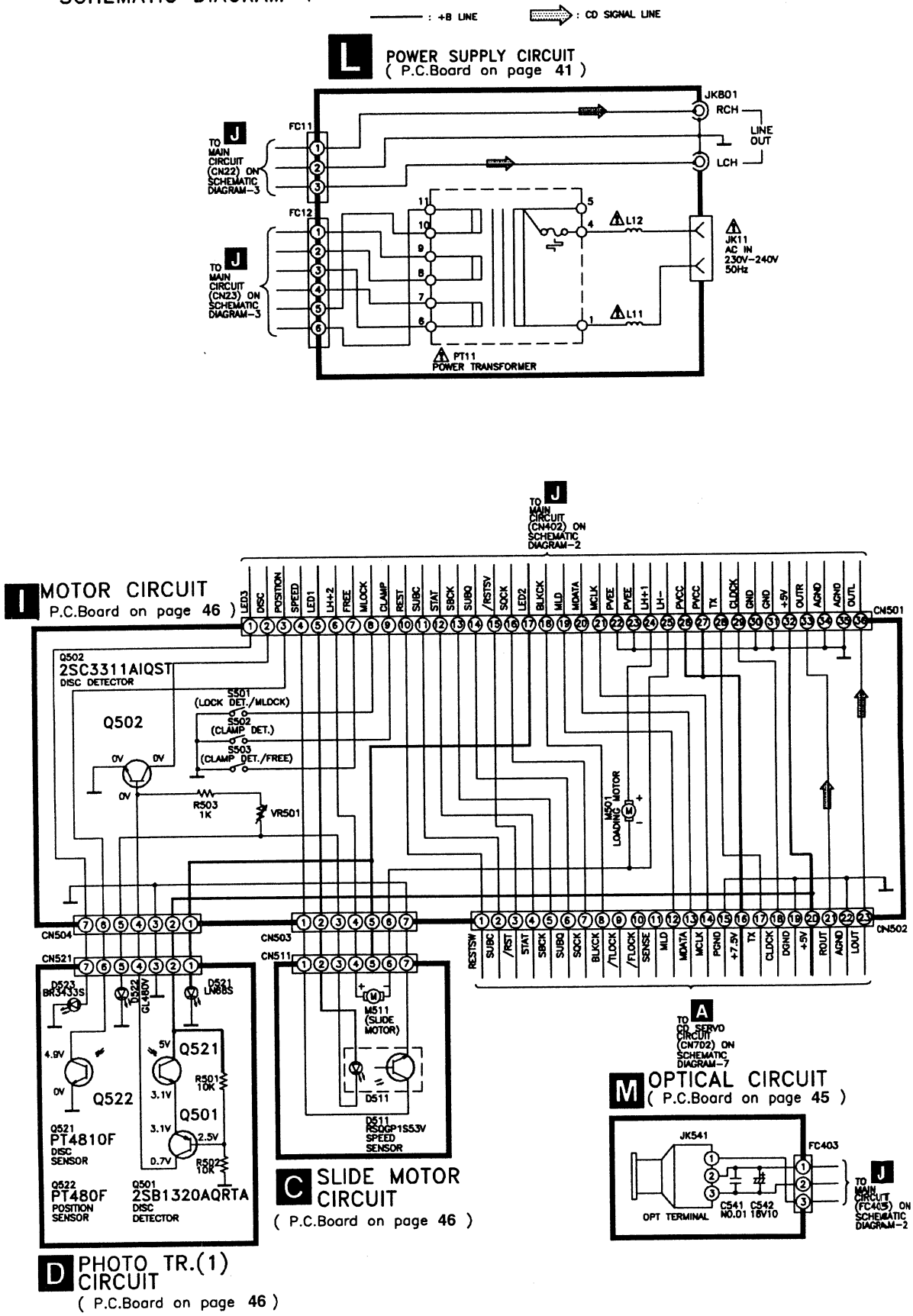
- **Importance safety notice:**
  Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.
- Put a conductive mat on the work table.

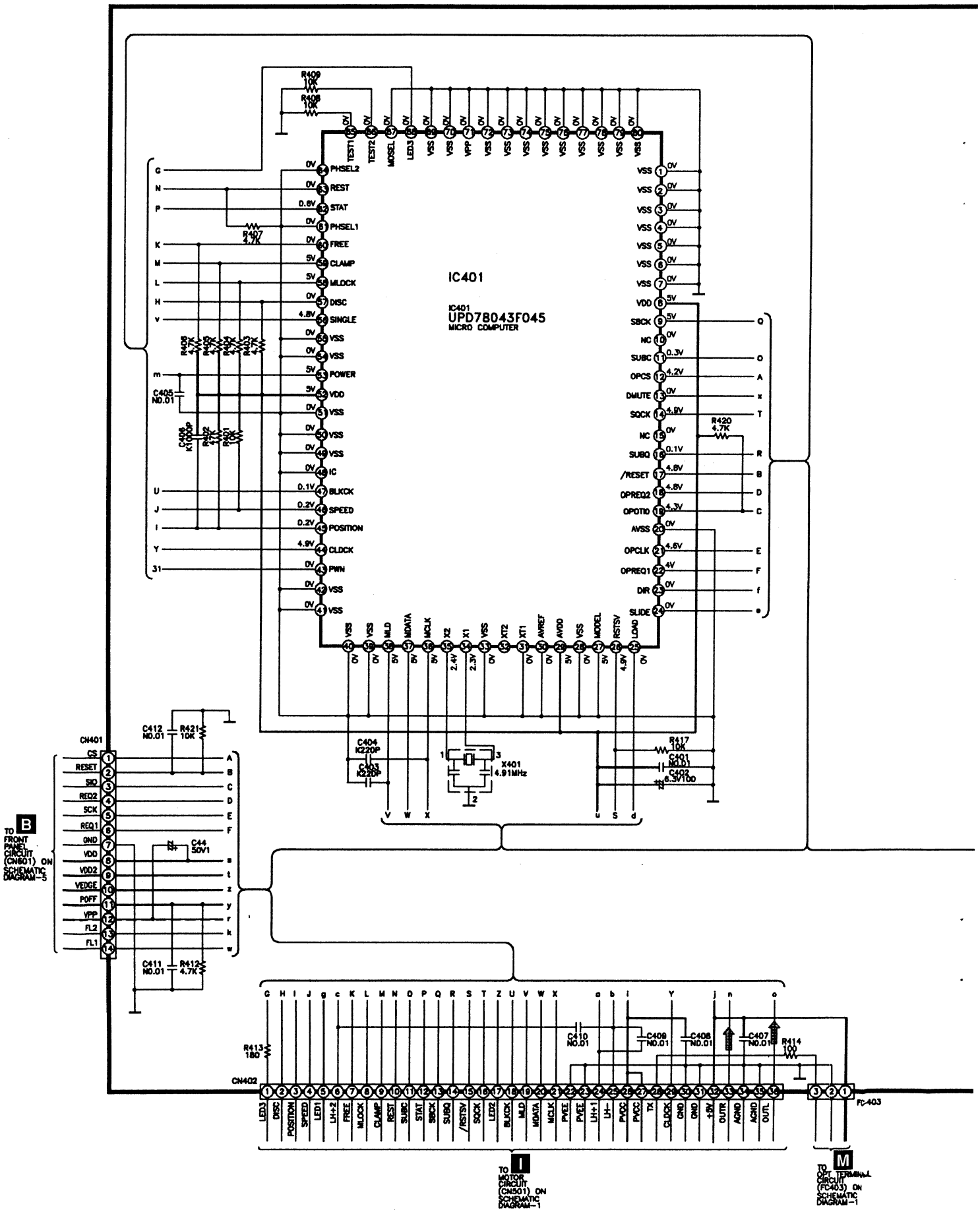
SCHEMATIC DIAGRAM–1



SCHEMATIC DIAGRAM–2

——— : +B LINE　　— — — : –B LINE　　⇨ : CD SIGNAL LINE

J MAIN CIRCUIT (P.C.Board on page 40)

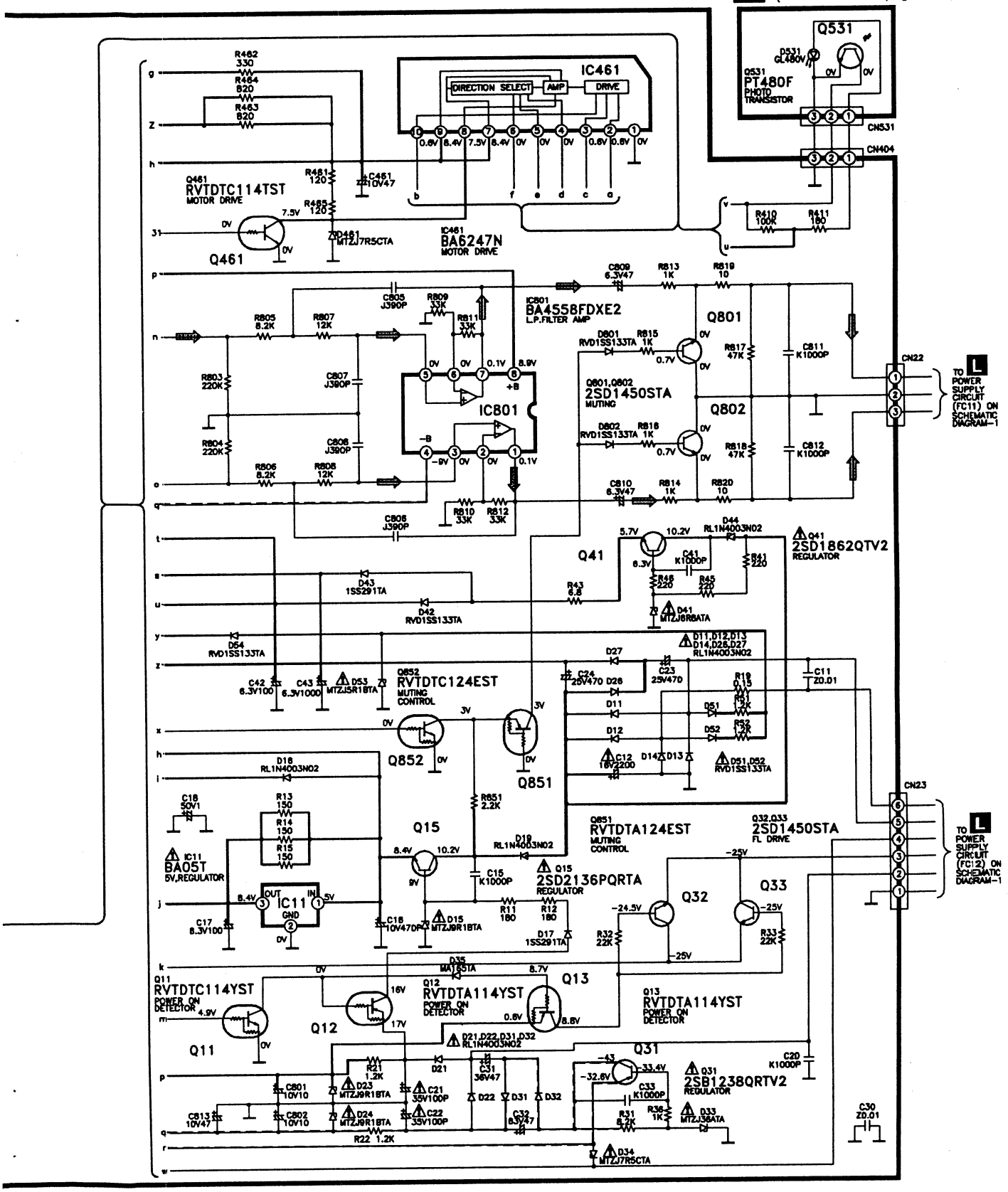


SCHEMATIC DIAGRAM–3

——— : +B LINE　　– – – : –B LINE　　: CD SIGNAL LINE

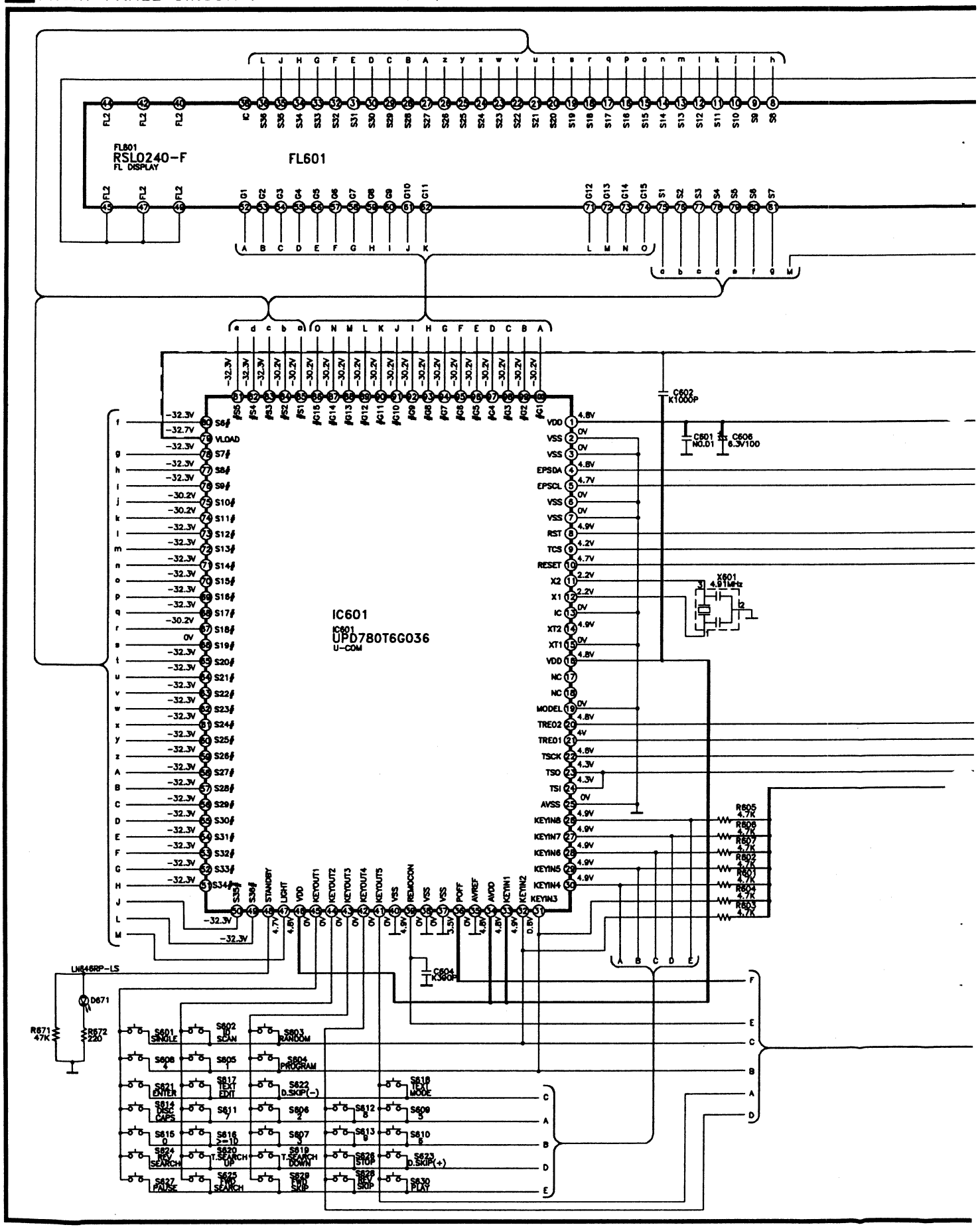
K PHOTO TR.(2) CIRCUIT

(P.C.Board on page 45)



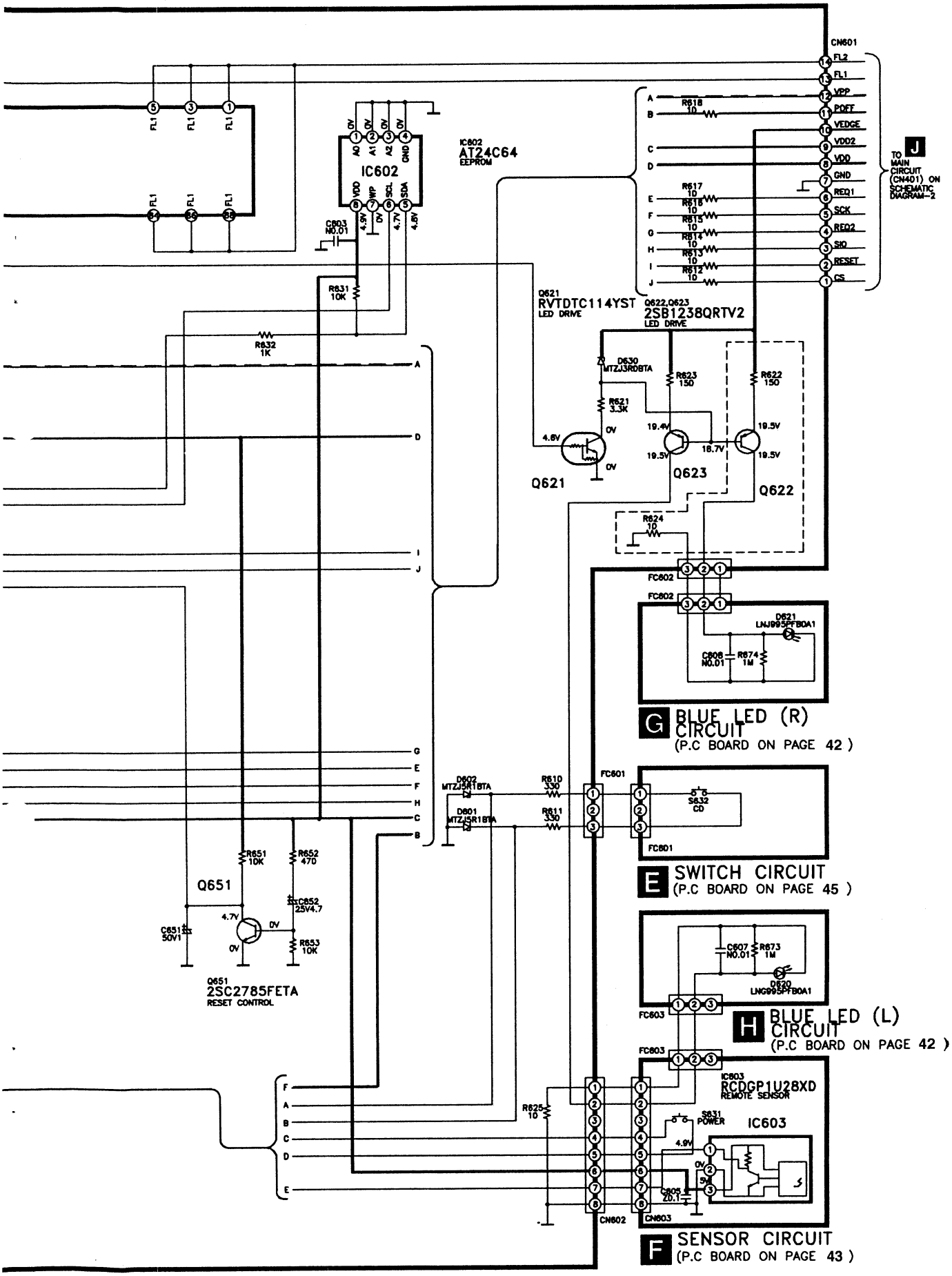
SCHEMATIC DIAGRAM–4 ——— : +B LINE ------- : –B LINE

B FRONT PANEL CIRCUIT (P.C BOARD ON PAGE 42, 43)



SCHEMATIC DIAGRAM–5

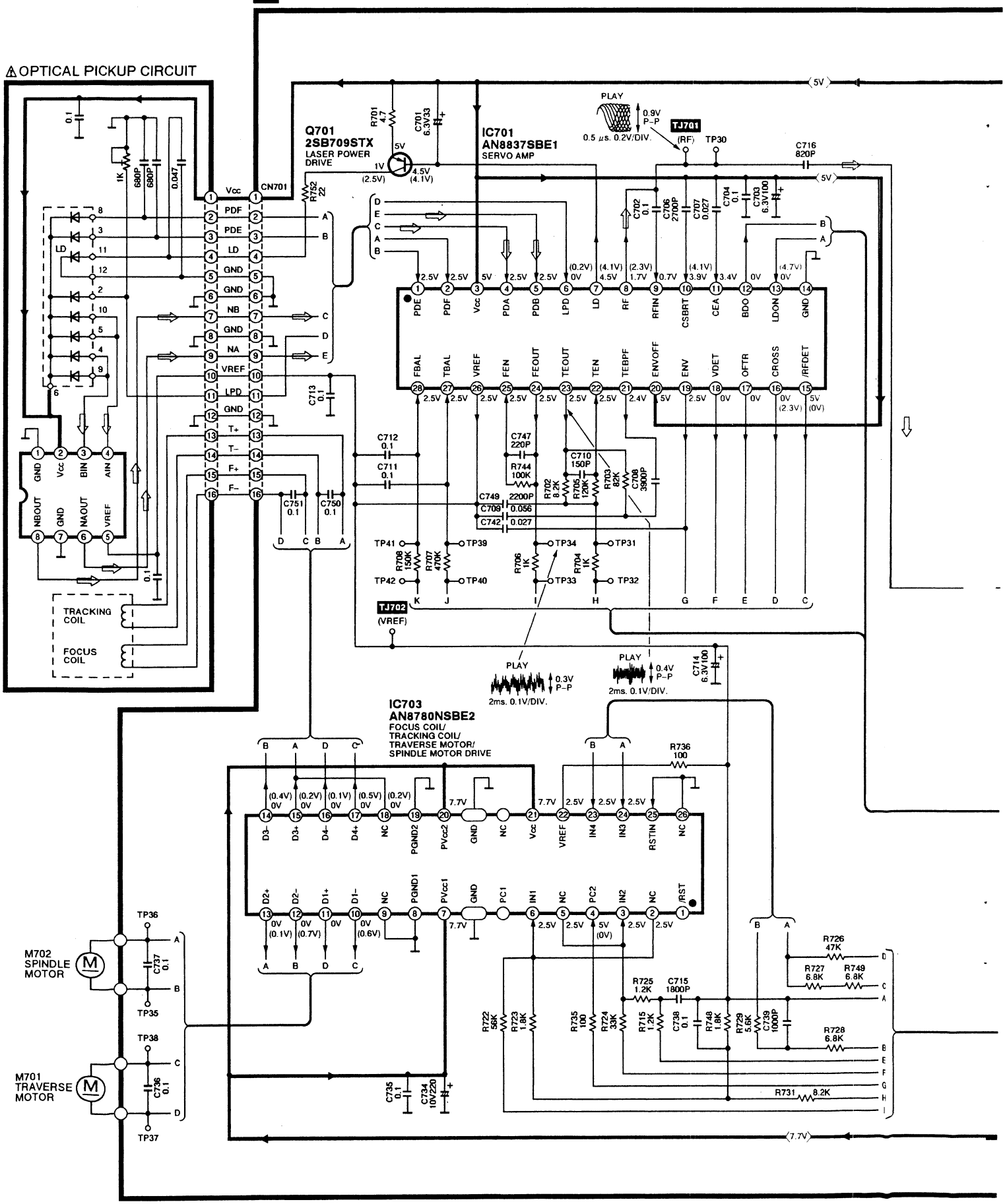
——— : +B LINE -------- : -B LINE



SCHEMATIC DIAGRAM-6

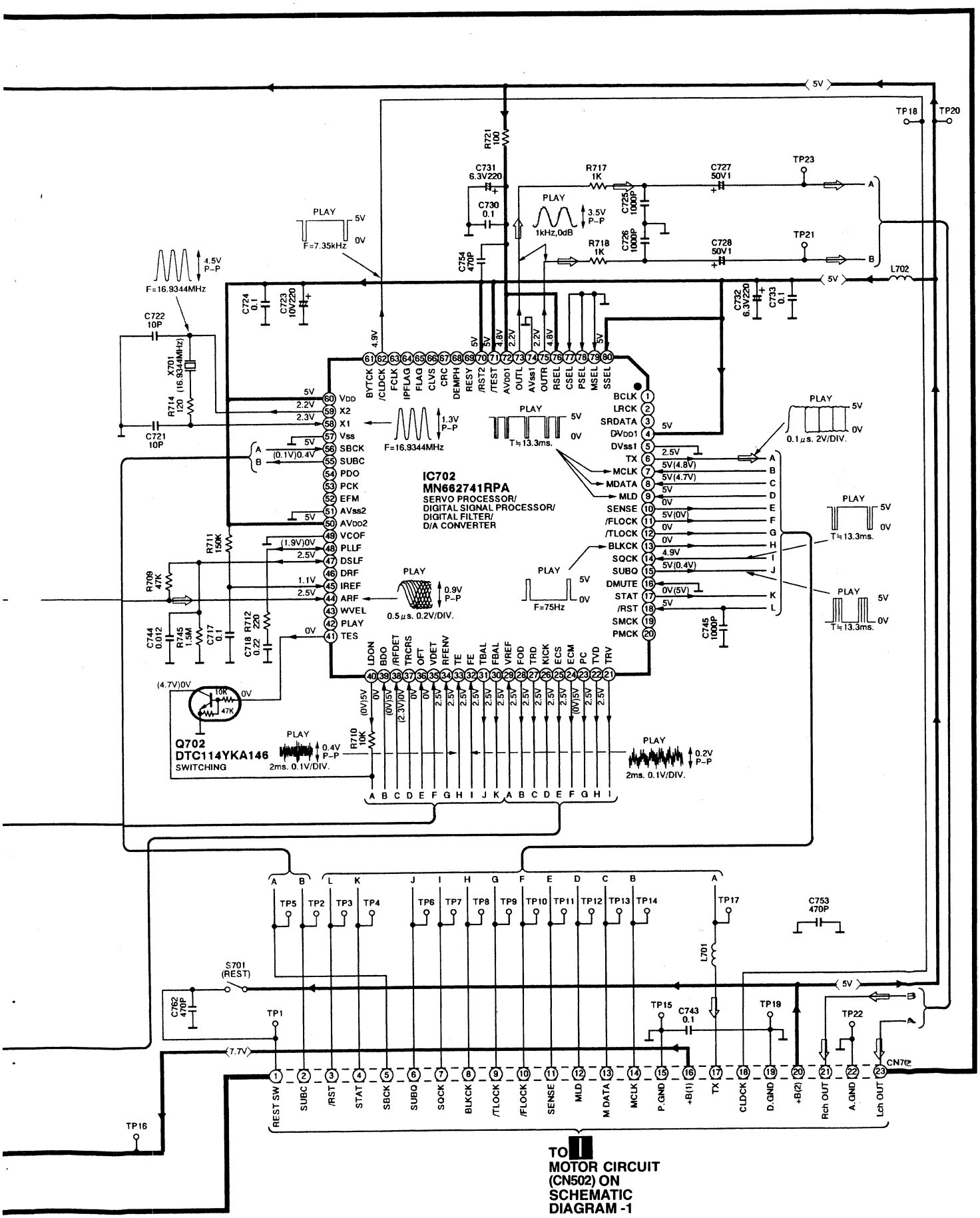
——— : +B LINE

A CD SERVO CIRCUIT (P.C.Board on page 44)



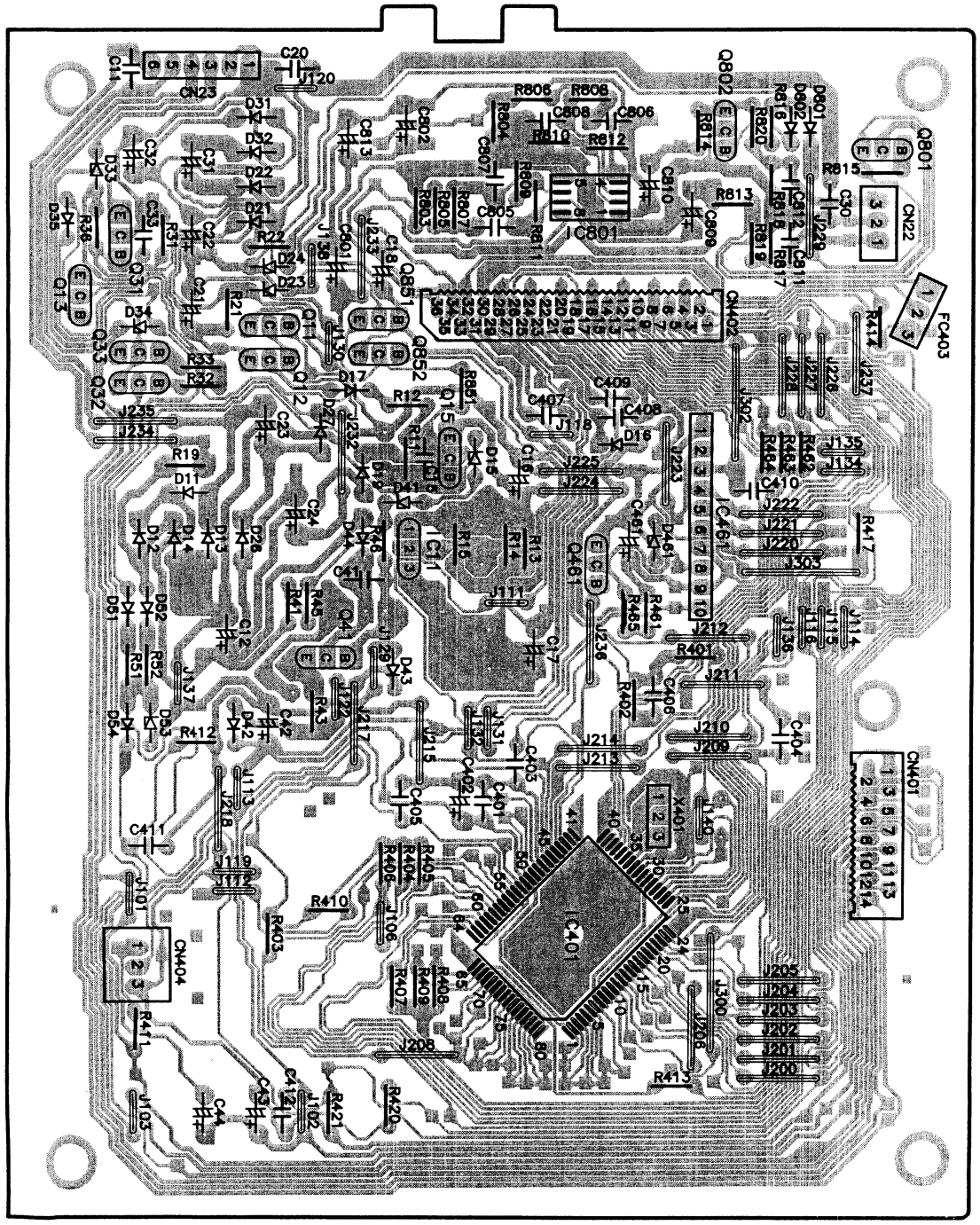
SCHEMATIC DIAGRAM-7

——— : +B LINE



Printed Circuit Board (This printed circuit board diagram may be modified at any time with the developement of new technology.)

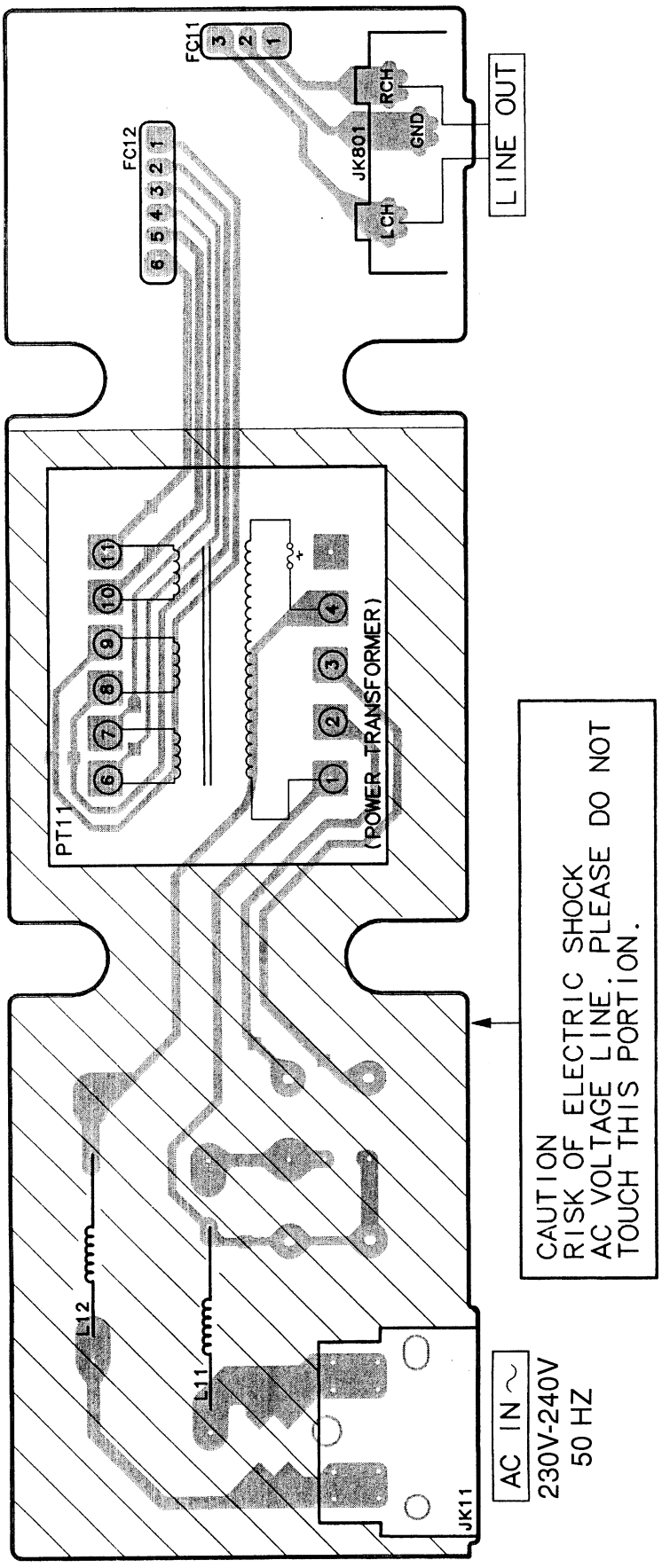
J MAIN P.C.B. (REP2491J-M)



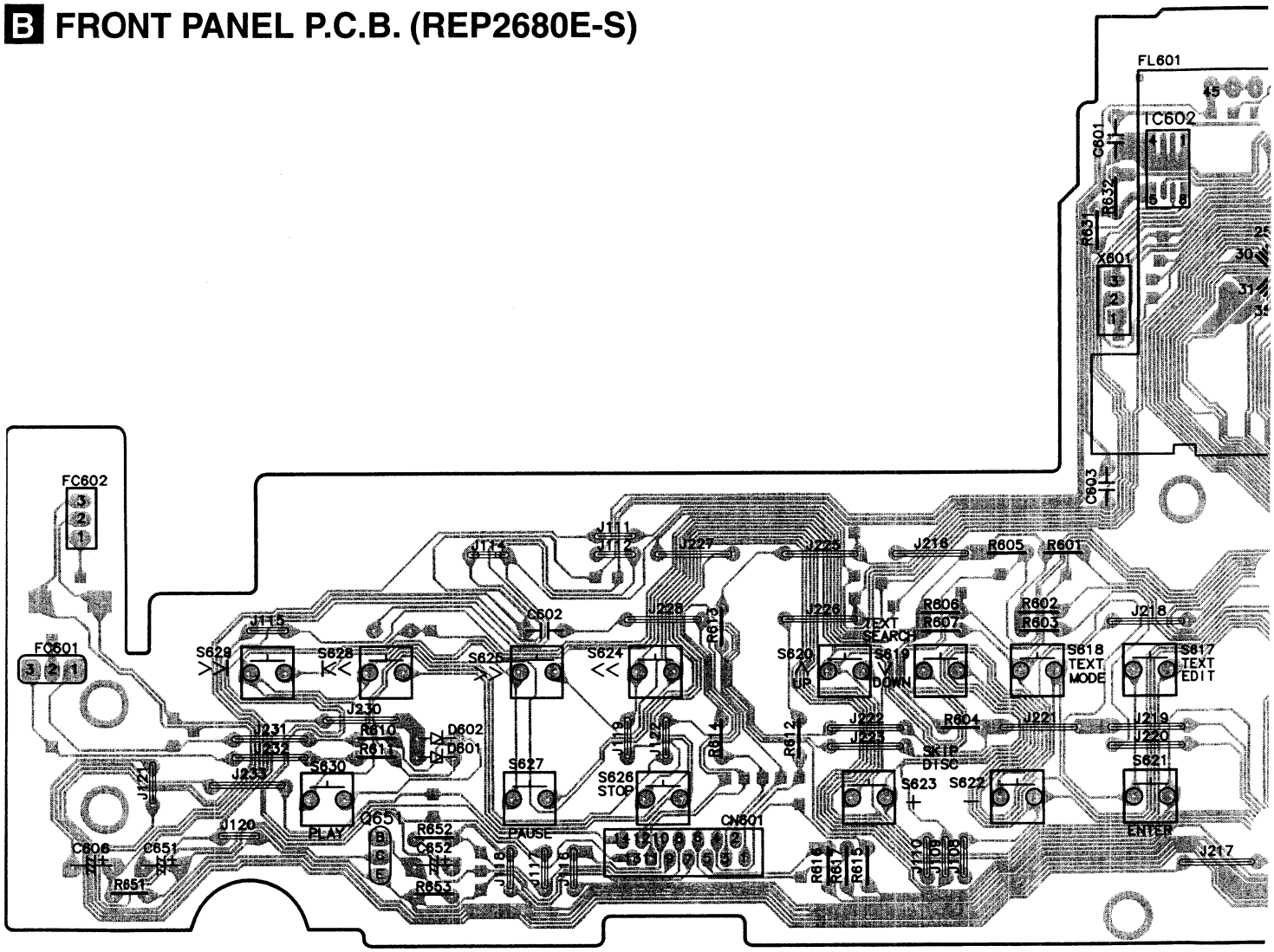
Semiconductors Locations Table

Ref. No	Loc. No
CN22	F2
CN23	B1
CN401	F6
CN402	E3
CN404	B7
D11	B4
D12	B4
D13	B4
D14	B4
D15	D4
D16	E4
D17	C3
D21	B2
D22	B2
D23	B3
D24	B3
D26	B4
D27	C4
D31	B2
D32	B2
D33	A2
D34	B3
D35	A2
D41	C4
D42	B6
D43	C5
D51	A5
D52	B5
D53	B6
D54	A6
D461	E4
D801	F2
D802	F2
FC403	F3
IC11	C4
IC401	D7
IC461	E4
IC801	D2
Q11	C3
Q12	C3
Q13	A3
Q15	C4
Q31	B3
Q32	A3
Q33	A3
Q41	C5
Q461	D4
Q801	F2
Q802	E1
Q851	C3
Q852	C3
X401	E6

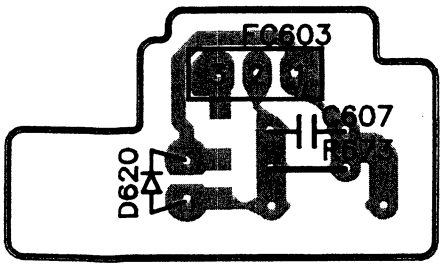
L POWER SUPPLY P.C.B. (REP2218F-P)



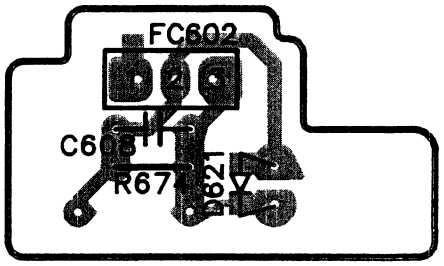
B FRONT PANEL P.C.B. (REP2680E-S)

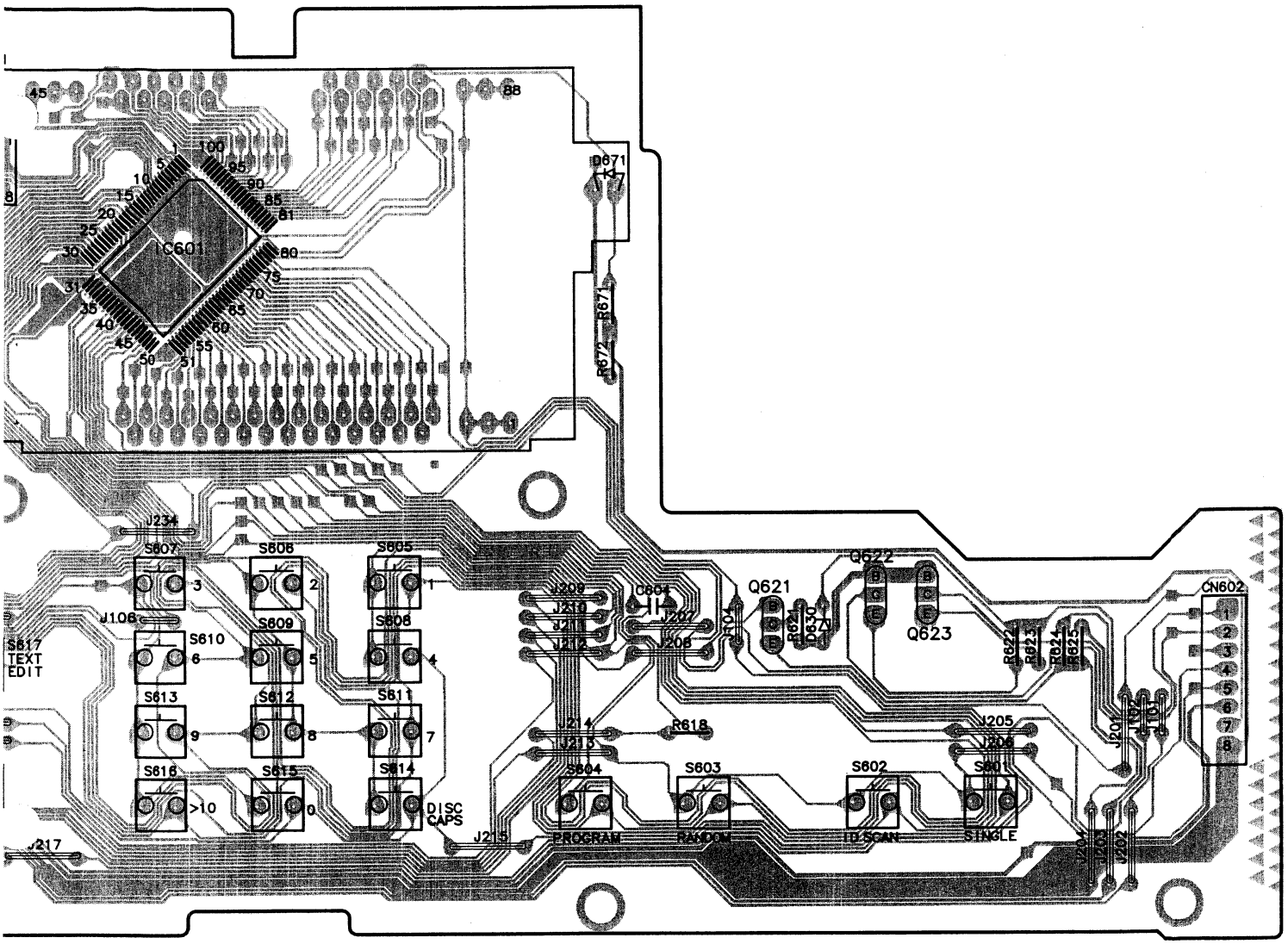


H BLUE LED (Left) P.C.B. (REP2680E-S)

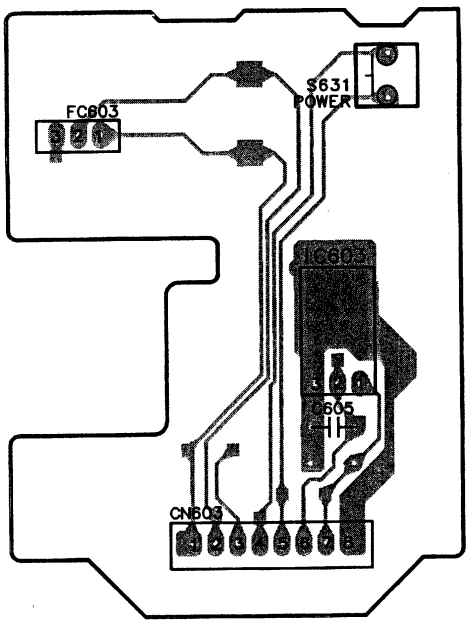


G BLUE LED (Right) P.C.B. (REP2680E-S)

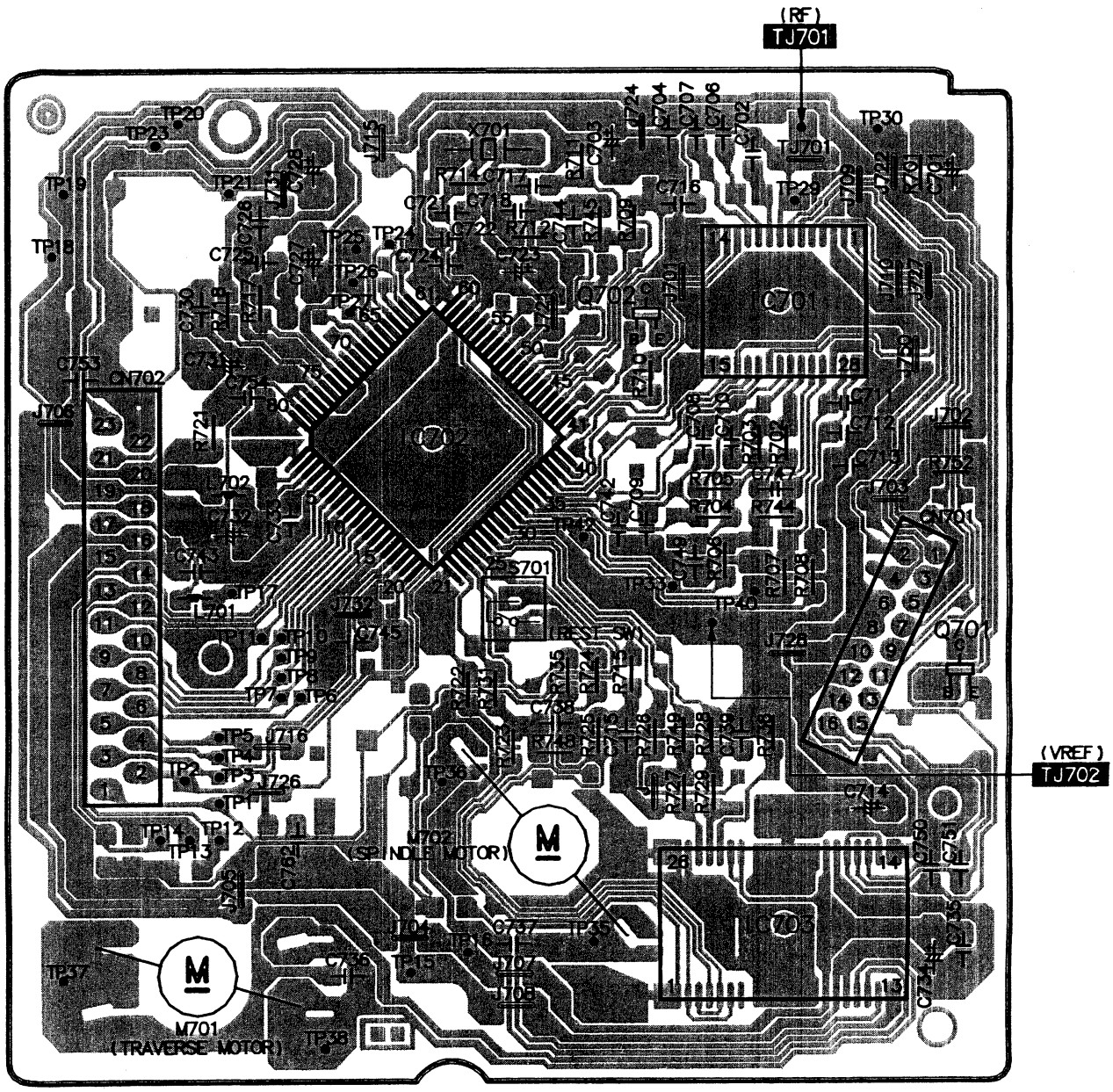




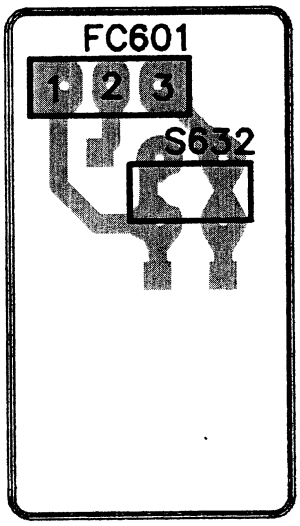
F SENSOR P.C.B. (REP2680E-S)



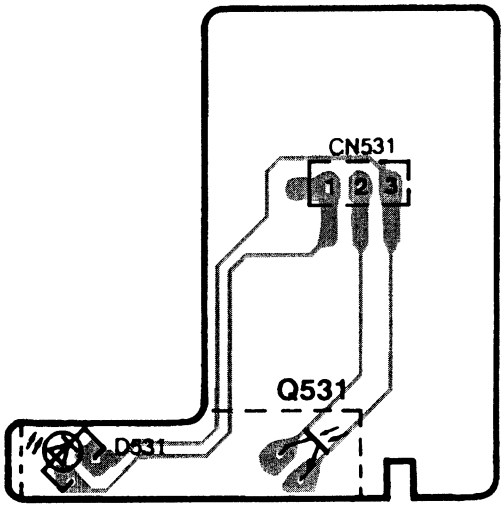
A CD SERVO P.C.B. (REPX0144A)



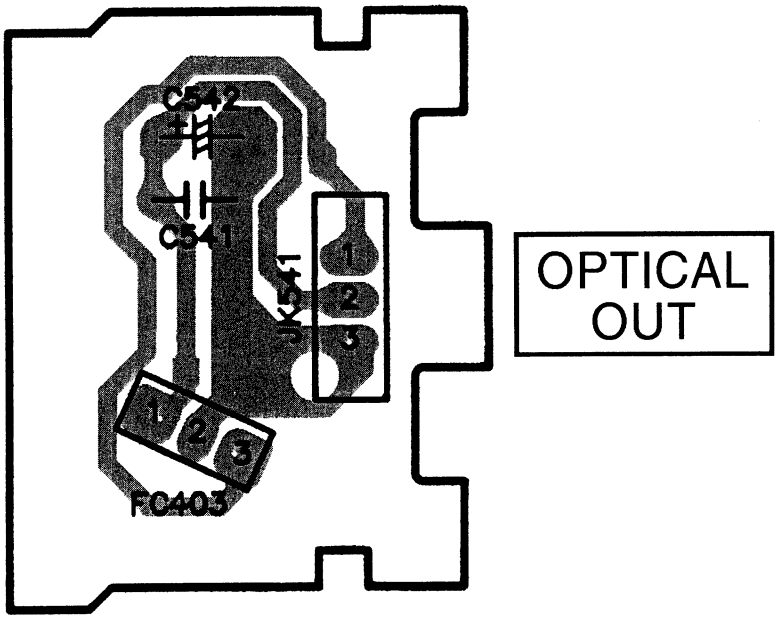
E SWITCH P.C.B. (REP2680E-S)



K PHOTO TRANSISTOR (2) P.C.B. (REP2348A-N)

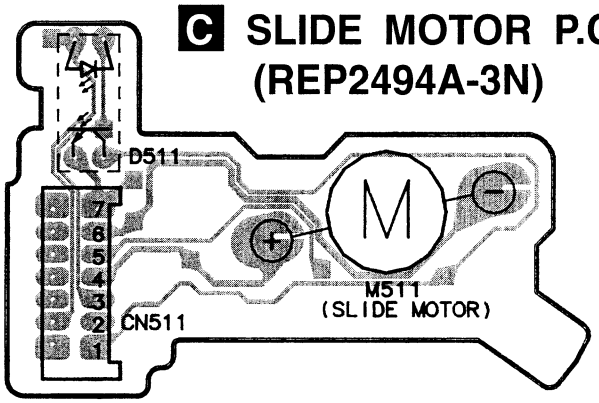


M OPTICAL P.C.B. (REP2491J-M)

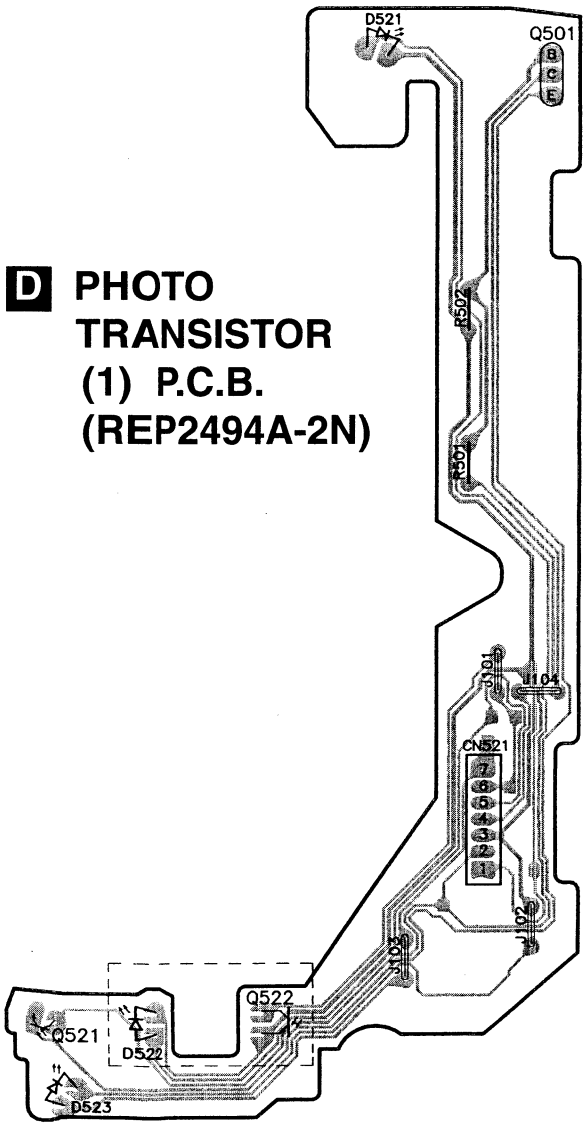


The 3 P.C.B.'s shown below (REP2494-1N , REP2494-2N , REP2494-3N) are sold as assembly part no. ***RFKBMC410PK - P.C.B. ass'y reference no. 379*** (refer page 51 - Repalacement Parts List).

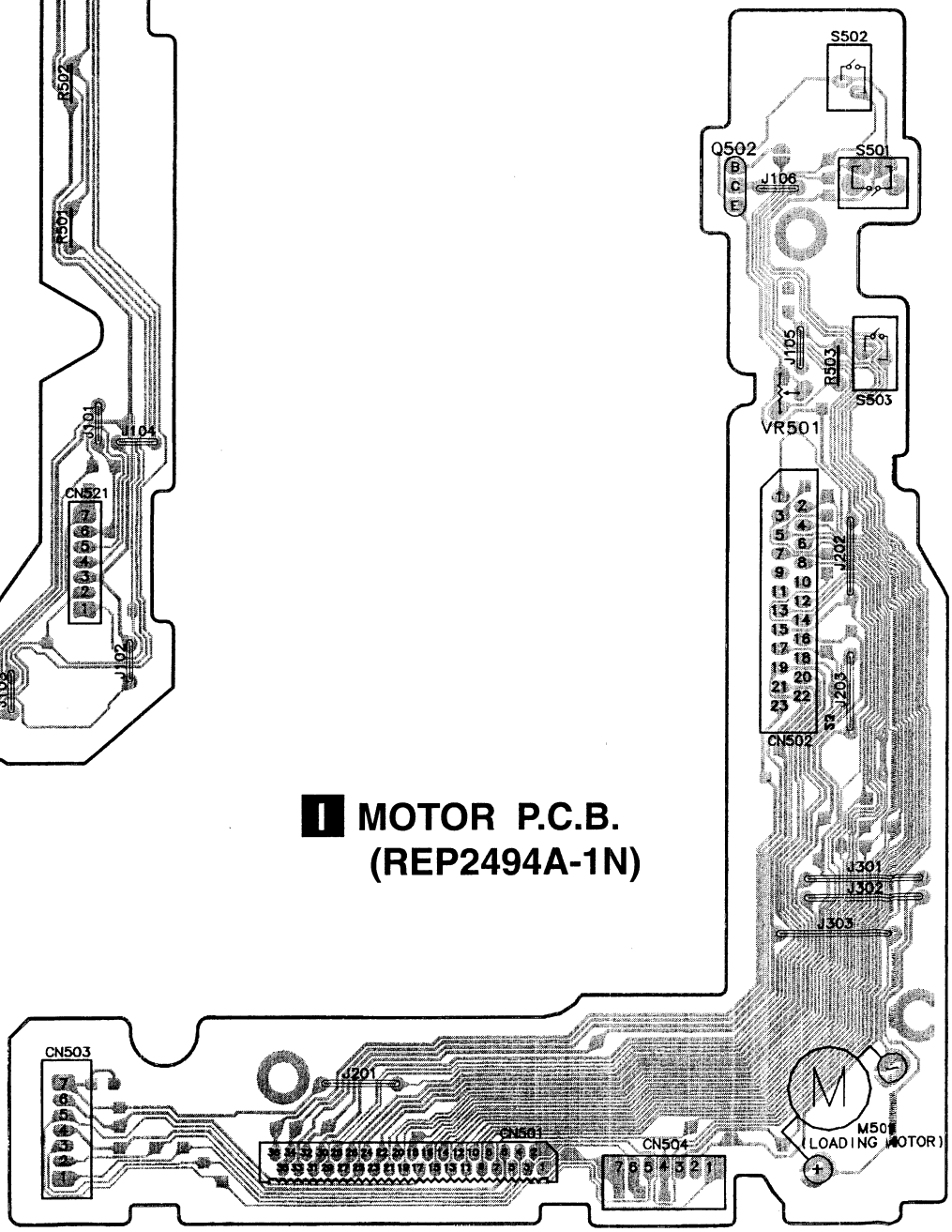
C SLIDE MOTOR P.C.B. (REP2494A-3N)



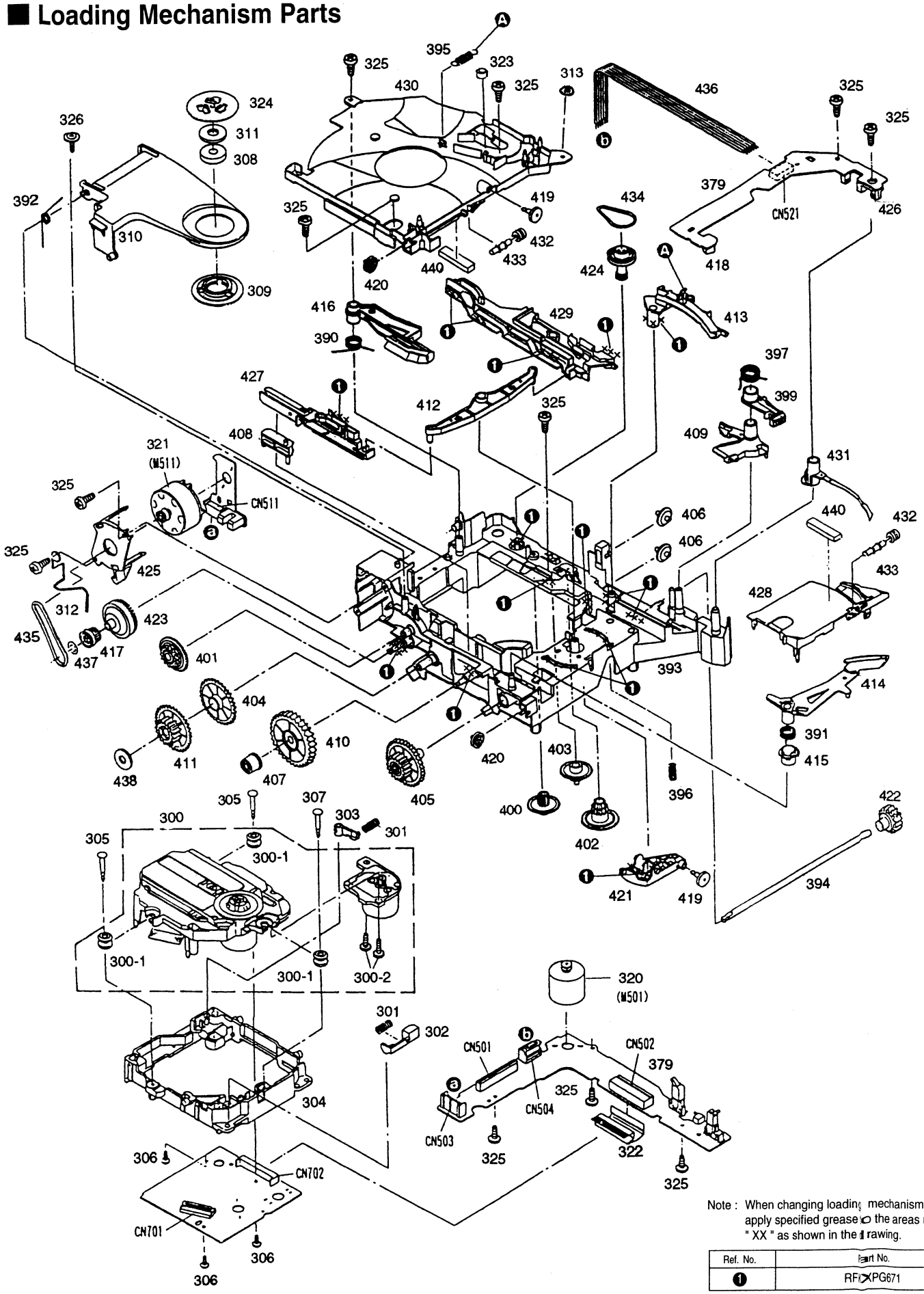
D PHOTO TRANSISTOR (1) P.C.B. (REP2494A-2N)



I MOTOR P.C.B. (REP2494A-1N)



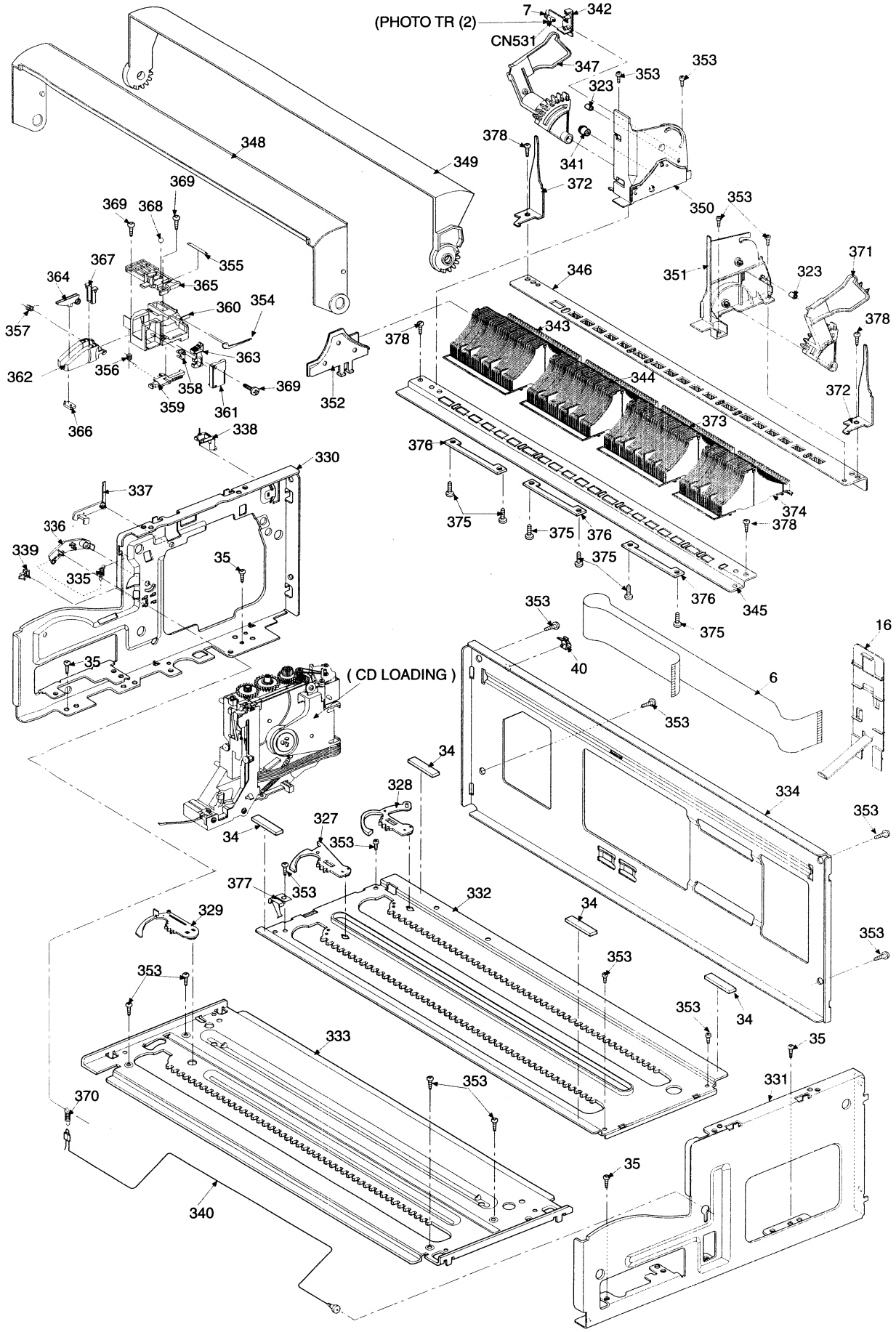
■ Loading Mechanism Parts

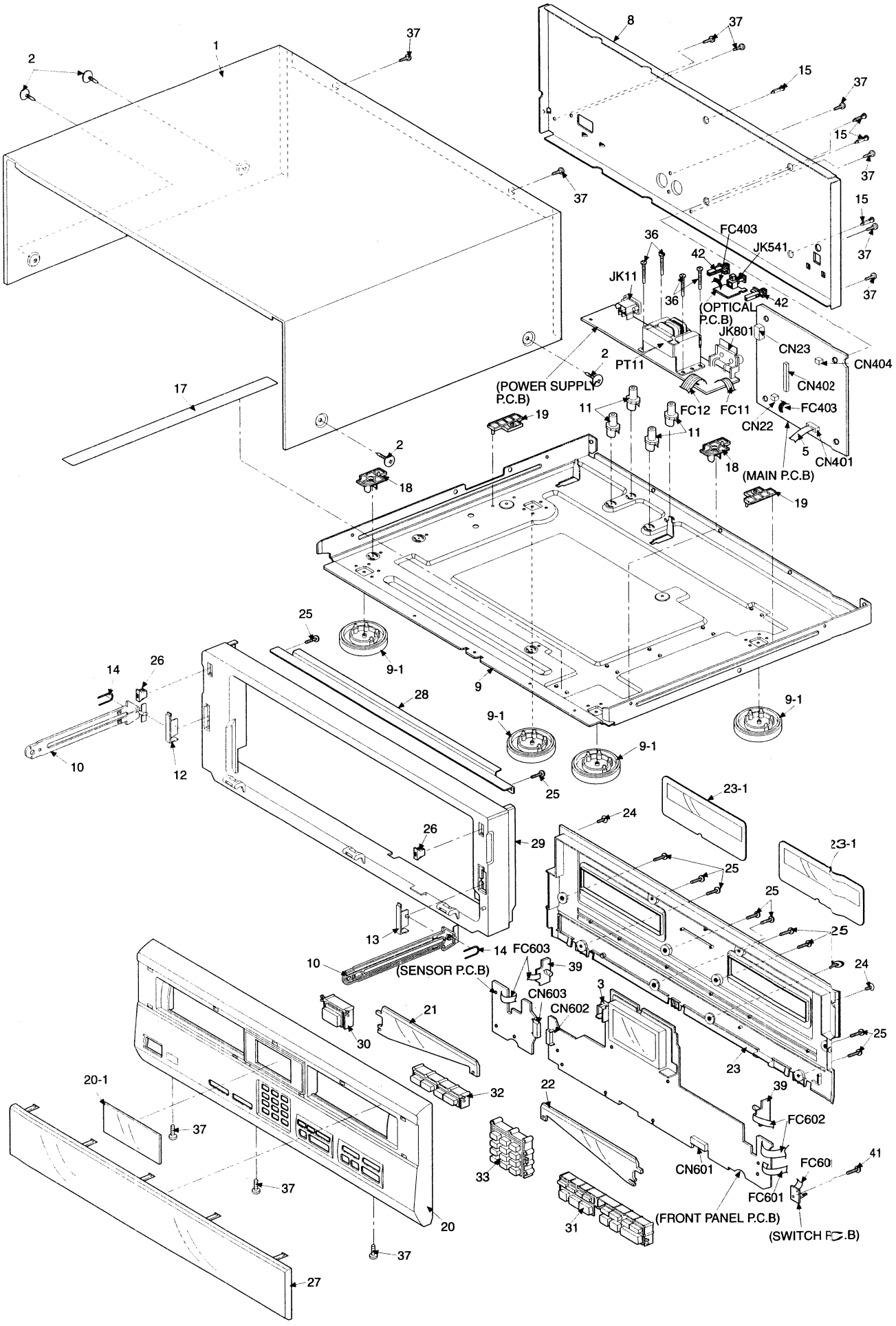


Note : When changing loading mechanism parts, apply specified grease to the areas marked " XX " as shown in the drawing.

Ref. No.	Part No.
❶	RFKXPG671

■ Cabinet Parts Location




1
2
37
8
15
36
42
FC403
JK541
JK11
(OPTICAL P.C.B)
JK801
CN23
CN404
CN402
CN22
CN401
(MAIN P.C.B)
PT11
(POWER SUPPLY P.C.B)
FC12
FC11
17
18
19
11
5
9
9-1
25
14
26
28
10
12
29
13
(SENSOR P.C.B)
FC603
CN603
CN602
39
3
21
30
32
23-1
24
23
22
FC602
CN601
FC601
FC60
41
(FRONT PANEL P.C.B)
(SWITCH P.C.B)
31
33
20
20-1
27

■ Replacement Parts List

Notes: * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
* The parenthesized in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indication can be used for all areas.
* [M] in Remarks column indicates parts that are supplied by **MESA**.
* **Warning** : This product uses a laser diode. Refer to caution on page 2.

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RKM0336-K	CABINET ACCESSORY	[M]
2	SNE2129-3	SCREW	[M]
3	RMN0443	FL HOLDER	[M]
5	REE0867	14P FFC	[M]
6	REZ0988	36P FFC	[M]
7	REZ0905-2	3P FFC	[M]
8	RGR0247C-CA	BACK PANEL	[M]E
8	RGR0247C-DA	BACK PANEL	[M]EB EG
9	RFKJLMC70P-K	BOTTOM CHASSIS ASS'Y	[M]
9-1	RKA0079-A	FOOT	[M]
10	RKJ0016	SIDE STAY	[M]
11	RKQ0089-J	PCB HOLDER	[M]
12	RKQ0193-K	SIDE GRIL (L)	[M]
13	RKQ0194-K	SIDE GRIL (R)	[M]
14	RME0209	STAY SPRING	[M]
15	RMN0341	FL HOLDER	[M]
16	RMR0950-K	FFC HOLDER	[M]
17	RMR0961-Q	FFC COVER	[M]
18	RMX0115	MECHA SPACER A	[M]
19	RMX0116	MECHA SPACER B	[M]
20	RFKGLMC7EB-K	FRONT PANEL ASS'Y	[M]
20-1	RGK1040B-Q	FL FILTER	[M]
21	RGL0414-Q	PRISM (L)	[M]
22	RGL0415-Q	PRISM (R)	[M]
23	RFKHLMC6P-K	BACK PANEL ASS'Y	[M]
23-1	RGK1041-Q	REAR WINDOW	[M]
24	RHD26023-K	SCREW	[M]
25	RHD26028-T	FRONT PANEL SCREWS	[M]
26	RKG0009	MAGNET CATCH	[M]
27	RKW0543-Q	WINDOW	[M]
28	RMA0998	MECHA ANGLE	[M]
29	RGP0670-K	GRILL	[M]
30	RGU1649-K	POWER BUTTON	[M]
31	RGU1650-K	MAIN BUTTON	[M]
32	RGU1651-K	PROGRAM BUTTON	[M]
33	RGU1653-K	12 KEY BUTTON	[M]
34	RMG0429-K	CUSHION RUBBER	[M]
35	XTB3+10FFZ	SCREW	[M]
36	XTB3+20JFZ	SCREW	[M]
37	XTBS3+8JFZ1	SCREW	[M]
39	RFKBLMC6P-K	BLUE LED PCB ASS'Y	[M]
40	SHRD163	CORD HOLDER	[M]
41	XTBS26+8J	SCREW	[M]
42	RMN0203	PCB HOLDER	[M]
		TRAVERSE DECK	
300	RAE0152Z-M	TRAVERSE	[M]
300-1	SHGD113-1	FLOATING CUSHION	[M]
300-2	SNSD38	TRV MOTOR ASS'Y SCREW	[M]
301	RMB0455	FRONT/BACK ARM SPRING	[M]
302	RML0423	FRONT ARM	[M]
303	RML0424-1	BACK ARM	[M]
304	RMR0937-K	TRV CHASSIS	[M]
305	RMS0123-1	FIXED PIN B	[M]
306	XTN2+6G	PCB SCREW	[M]
307	RMS0350	FIXED PIN A	[M]
308	RMQ0653	MAGNET	[M]
309	RMR0624-W2	CLAMPER	[M]
310	RMR0926-K1	CLAMP PLATE	[M]
311	RMA1003	BACK YOKE	[M]
312	RME0225	SPRING	[M]
313	RHW52002	WASHER	[M]
320	RFKPLMC50PAK	LOADING MOTOR ASS'Y	[M]
321	RFKPLMC50PBK	SLIDE MOTOR ASS'Y	[M]
322	REZ0916	23P FFC	[M]
323	RMG0200	RUBBER TUBE	[M]
324	RMR0334	FIXED PLATE	[M]
325	XTBS26+10J	SCREW	[M]
326	XTWS3+10Q	SCREW	[M]
327	RDG0333	FRONT LOCK GEAR	[M]
328	RDG0334	BACK LOCK GEAR	[M]
329	RDG0374	BOTTOM LOCK GEAR	[M]
330	RMA0904	SIDE PLATE L	[M]
331	RMA0905	SIDE PLATE	[M]
332	RMA0914	TOP RAIL	[M]
333	RMA0915	BOTTOM RAIL	[M]
334	RMA0916	BACK SUPPORT PLATE	[M]
335	RMB0469	LOCK ARM SPRING	[M]
336	RML0421	STAY LOCK ARM	[M]
337	RML0436	FRONT LOCK PLATE	[M]
338	RML0437	REAR LOCK PLATE	[M]
339	RMR0959-K	ROPE GUIDE	[M]
340	RMW0010	GUARD ROPE (51)	[M]
341	RDG0183-L	DAMPER GEAR	[M]
342	RMN0388	SENSOR HOLDER	[M]
343	RFKNLMC50PCK	DISC STOCKER (A)	[M]
344	RFKNLMC50PDK	DISC STOCKER (B)	[M]
345	RMA0912	FRONT STICKER BASE	[M]
346	RMA0913	BACK STICKER BASE	[M]
347	RML0419	SHUTTER LEVER LEFT	[M]
348	RMR0935-K	INSIDE SHUTTER (51)	[M]
349	RMR0936-K	OUTSIDE SHUTTER (51)	[M]
350	RMR0932-K	SHUTTER SUPPORT	[M]
351	RMR0947-K	SHUTTER SUPPORT RIGHT	[M]
352	RMR0948-H	STOCKER SEPARATOR PLATE	[M]
353	XTB3+6F	SCREW	[M]
354	RFKNLMC50PEK	E. PUSH LEVER ASS'Y	[M]
355	RMC0291	E. CLICK SPRING	[M]
356	RME0203	E. SLIDE SPRING G	[M]
357	RME0204	E LEVER SPRING	[M]
358	RML0438	E RELAY LEVER	[M]
359	RML0439	E SLIDE PLATE	[M]
360	RMR0938-K	EJECT BASE	[M]
361	RMR0939-K	E COVER	[M]
362	RMR0940-K	E LEVER	[M]
363	RMR0941-H	E BUTTON	[M]
364	RMR0943-H	E SUPPORT LEVER	[M]
365	RMR0958-K	E GUIDE	[M]
366	RMR0964-K	E. SUPPORT A	[M]
367	RMR0965-K	E SUPPORT B	[M]
368	SFYB5-32	E CLICK BALL	[M]
369	XTN2+6JFZ	EJECTOR BK SCREW	[M]
370	RMB0454	GUARD ROPE SPRING	[M]
371	RML0420	SHUTTER LEVER (R)	[M]
372	RMA1006	SHUTTER LEVER PLATE	[M]
373	RFKNLMC400PA	DISC STOCKER C	[M]
374	RFKNLMC400PB	DISC STOCKER D	[M]

Ref No.	Part No.	Part Name & Description	Remarks
375	RHD20047-K	M2 SCREW	[M]
376	RMA0995	STOPPER	[M]
377	RMC0316	BALANCE SPRING	[M]
378	XTB3+7F	SCREW	[M]
379	RFKBMC410PK	P.C.B ASS'Y	[M]
390	RME0195	8 CD SPRING	[M]
391	RME0196	REVERSE LEVER SPRING	[M]
392	RME0197	CLAMP SPRING	[M]
393	RFKNLMC50PBK	MECHANISM BASE ASS'Y	[M]
394	RMS0519	JOINT SHAFT	[M]
395	RMB0453	FORWARD LEVER SPRING	[M]
396	RMB0483	RELEASE LOCK SPRING	[M]
397	RME0194	SUB LEVER SPRING	[M]
399	RML0413	FEED SUPPORT LEVER	[M]
400	RDG0337	SPEED DOWN GEAR A	[M]
401	RDG0342	SHIFT SPEED DOWN GEA	[M]
402	RDG0339	DRIVE GEAR	[M]
403	RDG0338	SPEED DOWN GEAR B	[M]
404	RDG0344	MIDDLE SHIFT GEAR	[M]
405	RDG0346	FORWARD SHIFT GEAR	[M]
406	RDP0081	BOTTOM SHIFT GEAR	[M]
407	RDP0080	TOP SHIFT GEAR	[M]
408	RMR0923	SLIDE SUPORT PLATE	[M]
409	RML0414	GUIDE LEVER	[M]
410	RDG0345	MIDDLE SHIFT GEAR B	[M]
411	RDG0343	REAR SHIFT GEAR	[M]
412	RML0411	JOINT LEVER	[M]
413	RML0415	REVERSE FOOD LEVER	[M]
414	RML0417	RETURN LEVER A	[M]
415	RML0418	RETURN LEVER B	[M]
416	RML0416	8 CD LEVER	[M]
417	RDG0340	SHIFT PULLEY GEAR	[M]
418	RMN0358	LED HOLDER	[M]
419	RDP0082	ROPE ROLLER A	[M]
420	RDP0083	ROPE ROLLER B	[M]
421	RMR0927	ROLLER BASE	[M]
422	RDG0347	BOTTOM SHIFT ROLLER	[M]
423	RDG0341	COUNT RING	[M]
424	RDG0336	PULLEY GEAR	[M]
425	RMN0356	MOTOR HOLDER	[M]
426	RMN0399	SENSOR HOLDER	[M]
427	RMR0922	TOP SLIDE PLATE	[M]
428	RMR0924-K1	DISC GUIDE L	[M]
429	RMR0921	BOTTOM SLIDE PLATE	[M]
430	RMR0925-K	DISC GUIDE R	[M]
431	RML0412	FORWARD LEVER	[M]
432	RDP0091-2	DISC ROLLER	[M]
433	RDP0092-1	ROLLER GUIDE	[M]
434	RDV0041	BELT (LOADING)	[M]
435	RDV0046	BELT (SHIFT)	[M]
436	REZ0832	7P FLAT CABLE	[M]
437	RHW21009	WASHER	[M]
438	RHW42002	STOPPER WASHER	[M]
440	RMF0237-1	FELT	[M]
		INTEGRATED CIRCUITS	
IC11	BA05T	IC, 5V REGULATOR	[M] ⚠
IC401	UPD78043F045	IC, MICRO COMPUTER	[M]
IC461	BA6247N	IC	[M]
IC601	UPD780T6G036	IC, U-COM	[M]
IC602	AT24C64	IC, EEPROM	[M]
IC603	RCDGP1U28XD	IC, REMOTE SENSOR	[M]
IC701	AN8837SBE1	IC, HEAD AMP	[M]
IC702	MN662741RPA	IC, DIGITAL LSI	[M]
IC703	AN8780NSBE2	IC	[M]
IC801	BA4558FDXE2	IC	[M]
		TRANSISTORS	
Q11	RVTDTC114YST	TRANSISTOR	[M]
Q12	RVTDTA114YST	TRANSISTOR	[M]
Q13	RVTDTA114YST	TRANSISTOR	[M]
Q15	2SD2136PQRTA	TRANSISTOR	[M] ⚠
Q31	2SB1238QRTV2	TRANSISTOR	[M] ⚠
Q32	2SD1450STA	TRANSISTOR	[M]
Q33	2SD1450STA	TRANSISTOR	[M]
Q41	2SD1862QTV2	TRANSISTOR	[M] ⚠
Q461	RVTDTC114TST	TRANSISTOR	[M]
Q501	2SB1320AQRTA	TRANSISTOR	[M]
Q502	2SC3311AIQST	TRANSISTOR	[M]
Q521	PT4810F	TRANSISTOR	[M]
Q522	PT480F	TRANSISTOR	[M]
Q531	PT480F	PHOTO TRANSISTOR	[M]
Q621	RVTDTC114YST	TRANSISTOR	[M]
Q622	2SB1238QRTV2	TRANSISTOR	[M]
Q623	2SB1238QRTV2	TRANSISTOR	[M]
Q651	2SC2785FETA	TRANSISTOR	[M]
Q701	2SA1037AKSTX	TRANSISTOR	[M]
Q702	DTC114YKA146	TRANSISTOR	[M]
Q801	2SD1450STA	TRANSISTOR	[M]
Q802	2SD1450STA	TRANSISTOR	[M]
Q851	RVTDTA124EST	TRANSISTOR	[M]
Q852	RVTDTC124EST	TRANSISTOR	[M]
		DIODES	
D11	RL1N4003N02	DIODE	[M] ⚠
D12	RL1N4003N02	DIODE	[M] ⚠
D13	RL1N4003N02	DIODE	[M] ⚠
D14	RL1N4003N02	DIODE	[M] ⚠
D15	MTZJ9R1BTA	DIODE	[M] ⚠
D16	RL1N4003N02	DIODE	[M]
D17	1SS291TA	DIODE	[M]
D19	RL1N4003N02	DIODE	[M]
D21	RL1N4003N02	DIODE	[M] ⚠
D22	RL1N4003N02	DIODE	[M] ⚠
D23	MTZJ9R1BTA	DIODE	[M] ⚠
D24	MTZJ9R1BTA	DIODE	[M] ⚠
D26	RL1N4003N02	DIODE	[M] ⚠
D27	RL1N4003N02	DIODE	[M] ⚠
D31	RL1N4003N02	DIODE	[M] ⚠
D32	RL1N4003N02	DIODE	[M] ⚠
D33	MTZJ36ATA	DIODE	[M] ⚠
D34	MTZJ7R5CTA	DIODE	[M] ⚠
D35	MA165TA	DIODE	[M]
D41	MTZJ6R8ATA	DIODE	[M] ⚠
D42	RVD1SS133TA	DIODE	[M]
D43	1SS291TA	DIODE	[M]
D44	RL1N4003N02	DIODE	[M]
D51	RVD1SS133TA	DIODE	[M] ⚠
D52	RVD1SS133TA	DIODE	[M] ⚠
D53	MTZJ5R1BTA	DIODE	[M] ⚠
D54	RVD1SS133TA	DIODE	[M]
D461	MTZJ7R5CTA	DIODE	[M]
D511	RSQGP1S53V	DIODE	[M]
D521	LN66S	DIODE	[M]
D522	GL480V	DIODE	[M]
D523	BR3433S	LED	[M]
D531	GL480V	LED	[M]
D601	MTZJ5R1BTA	DIODE	[M]
D602	MTZJ5R1BTA	DIODE	[M]
D620	LNG995PFB0A1	DIODE	[M]
D621	LNG995PFB0A1	DIODE	[M]
D630	MTZJ3R0BTA	DIODE	[M]
D671	LN846RP-LS	DIODE	[M]
D801	RVD1SS133TA	DIODE	[M]
D802	RVD1SS133TA	DIODE	[M]
		VARIABLE RESISTORS	
VR501	EVMLGGA00B14	V.R	[M]

Ref No.	Part No.	Part Name & Description	Remarks
		SWITCHES	
S501	RSP1A017-A	SW	[M]
S502	RSH1A005	SW	[M]
S503	RSH1A005	SW	[M]
S601	EVQ21405R	SW, SINGLE	[M]
S602	EVQ21405R	SW, ID SCAN	[M]
S603	EVQ21405R	SW, RANDOM	[M]
S604	EVQ21405R	SW, PROGRAM	[M]
S605	EVQ21405R	SW, 1	[M]
S606	EVQ21405R	SW, 2	[M]
S607	EVQ21405R	SW, 3	[M]
S608	EVQ21405R	SW, 4	[M]
S609	EVQ21405R	SW, 5	[M]
S610	EVQ21405R	SW, 6	[M]
S611	EVQ21405R	SW, 7	[M]
S612	EVQ21405R	SW, 8	[M]
S613	EVQ21405R	SW, 9	[M]
S614	EVQ21405R	SW, DISC CAPS	[M]
S615	EVQ21405R	SW, 0	[M]
S616	EVQ21405R	SW, >=10	[M]
S617	EVQ21405R	SW, TEXT EDIT	[M]
S618	EVQ21405R	SW, TEXT MODE	[M]
S619	EVQ21405R	SW, DOWN	[M]
S620	EVQ21405R	SW, UP	[M]
S621	EVQ21405R	SW, ENTER	[M]
S622	EVQ21405R	SW, DISC SKIP (-)	[M]
S623	EVQ21405R	SW, DISC SKIP (+)	[M]
S624	EVQ21405R	SW, SEARCH CHAPTR<<	[M]
S625	EVQ21405R	SW, SEARCH CHAPTR>>	[M]
S626	EVQ21405R	SW, STOP	[M]
S627	EVQ21405R	SW, PAUSE	[M]
S628	EVQ21405R	SW, SKIP/CUROSR I<<	[M]
S629	EVQ21405R	SW, SKIP/CUROSR >>I	[M]
S630	EVQ21405R	SW, PLAY	[M]
S631	EVQ21405R	SW, POWER	[M]
S632	RSH1A91ZA-A	SW, CD	[M]
S701	RSH1A043-U	SW, REST	[M]
		CONNECTORS	
CN22	RJS1A6603T1	3P CONNECTOR	[M]
CN23	RJS1A6606T1	TAPING CONNECTOR	[M]
CN401	RJS1A9414	FF CONNECTOR	[M]
CN402	RJS2A3336M	36P FFC CONNECTER	[M]
CN404	RJS1A6603T1	3P CONNECTOR	[M]
CN501	RJS2A3332	36P CONNECTOR	[M]
CN502	RJS1A6223-1	23P CONNECTOR	[M]

Ref No.	Part No.	Part Name & Description	Remarks
CN503	RJT057W007-1	7P CONNECTOR	[M]
CN504	RJS7T4ZA	7P CONNECTOR	[M]
CN511	RJU057W007	7P SOCKET	[M]
CN521	RJS7T7ZA	7P CONNECTOR	[M]
CN531	RJS3T6ZA	3P CONNECTOR	[M]
CN601	RJS1A9314	14P CONNECTOR	[M]
CN602	SJS50882JQH	CONNECTOR	[M]
CN603	SJT30845JQ	CONNECTOR	[M]
CN701	RJS2A6016	16P FFC CONNECTOR	[M]
CN702	RJS1A6723-1Q	23P FFC CONNCETOR	[M]
		COILS & TRANSFORMERS	
L11	SLQX400-1D	RADIO FREQ COIL	[M] ⚠
L12	SLQX400-1D	RADIO FREQ COIL	[M] ⚠
L701	RLBN102V-Y	CHIP INDUCTOR	[M]
L702	RLBN102V-Y	CHIP INDUCTOR	[M]
PT11	RTP1K4B027-X	POWER TRANSFORMER	[M] ⚠
		OSCILLATORS	
X401	RSXY4M91M01T	CERAMIC OSCILLATOR	[M]
X601	RSXY4M91M01T	CERAMIC OSCILLATOR	[M]
X701	RSXB16M9J02T	CRYSTAL OSCILLATOR	[M]
		DISPLAY TUBE	
FL601	RSL0240-F	FL	[M]
		WIRE HOLDERS	
FC11	REZ0899	3P WIRE KIT	[M]
FC12	REZ0898	6P WIRE KIT	[M]
FC403	RWJ1803175KK	3P WIRE	[M]
FC601	REZ1115	3P WIRE	[M]
FC602	REZ1117	3P WIRE	[M]
FC603	REZ1117	3P WIRE	[M]
		JACKS	
JK11	SJS9236-J	IC, AC INLET	[M] ⚠
JK541	GP1F32T	IC, OPT TERMINAL	[M]
JK801	RJH3201N	IC, RCA	[M]

Ref No.	Part No.	Part Name & Description	Remarks

■ Resistors & Capacitors

Notes :
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors),etc. are used.
  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- The parenthesized in the Remarks columns specify the areas. (Refer to the cover page for area.)
  Parts without these indication can be used for all areas.
- [M] in Remarks column indicates parts that are supplied by **MESA**.
- Capacitor values are in microfarad (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
- Resistors values are in ohms, unless specified otherwise, 1k=1,000(OHM), 1M=1,000k(OHM)

Ref No.	Part No.	Values & Remarks
	RESISTORS	
R11	ERDS2TJ181T	180 1/4W [M]
R12	ERDS2TJ181T	180 1/4W [M]
R13	ERDS2TJ151T	150 1/4W [M]
R14	ERDS2TJ151T	150 1/4W [M]
R15	ERDS2TJ151T	150 1/4W [M]
R19	ERQ16NKWR15E	0.15 1/6W [M]
R21	ERDS2TJ122T	1.2K 1/4W [M]
R22	ERDS2TJ122T	1.2K 1/4W [M]
R31	ERDS2TJ822T	8.2K 1/4W [M]
R32	ERDS2TJ223T	22K 1/4W [M]
R33	ERDS2TJ223T	22K 1/4W [M]
R36	ERDS2TJ102T	1K 1/4W [M]
R41	ERDS2TJ221T	220 1/4W [M]
R43	ERD2FCVJ6R8T	6.8 1/4W [M]
R45	ERDS2TJ221T	220 1/4W [M]
R46	ERDS2TJ221T	220 1/4W [M]
R51	ERDS2TJ122T	1.2K 1/4W [M]
R52	ERDS2TJ122T	1.2K 1/4W [M]
R401	ERDS2TJ103T	10K 1/4W [M]
R402	ERDS2TJ473T	47K 1/4W [M]
R403	ERDS2TJ472T	4.7K 1/4W [M]
R404	ERDS2TJ472T	4.7K 1/4W [M]
R405	ERDS2TJ472T	4.7K 1/4W [M]
R406	ERDS2TJ472T	4.7K 1/4W [M]
R407	ERDS2TJ472T	4.7K 1/4W [M]
R408	ERDS2TJ103T	10K 1/4W [M]
R409	ERDS2TJ103T	10K 1/4W [M]
R410	ERDS2TJ104T	100K 1/4W [M]
R411	ERDS2TJ181T	180 1/4W [M]
R412	ERDS2TJ472T	4.7K 1/4W [M]
R413	ERDS2TJ181T	180 1/4W [M]
R414	ERDS2TJ101T	100 1/4W [M]
R417	ERDS2TJ103T	10K 1/4W [M]
R420	ERDS2TJ472T	4.7K 1/4W [M]
R421	ERDS2TJ103T	10K 1/4W [M]
R461	ERDS2TJ121T	120 1/4W [M]
R462	ERDS2TJ331T	330 1/4W [M]
R463	ERDS2TJ821T	820 1/4W [M]
R464	ERDS2TJ821T	820 1/4W [M]
R465	ERDS2TJ121T	120 1/4W [M]
R501	ERDS2FJ103	10K 1/4W [M]
R502	ERDS2FJ103	10K 1/4W [M]
R503	ERDS2FJ102	1K 1/4W [M]
R601	ERDS2TJ472T	4.7K 1/4W [M]
R602	ERDS2TJ472T	4.7K 1/4W [M]
R603	ERDS2TJ472T	4.7K 1/4W [M]
R604	ERDS2TJ472T	4.7K 1/4W [M]
R605	ERDS2TJ472T	4.7K 1/4W [M]
R606	ERDS2TJ472T	4.7K 1/4W [M]
R607	ERDS2TJ472T	4.7K 1/4W [M]
R610	ERDS2TJ331T	330 1/4W [M]
R611	ERDS2TJ331T	330 1/4W [M]
R612	ERDS2TJ100T	10 1/4W [M]
R613	ERDS2TJ100T	10 1/4W [M]
R614	ERDS2TJ100T	10 1/4W [M]
R615	ERDS2TJ100T	10 1/4W [M]
R616	ERDS2TJ100T	10 1/4W [M]
R617	ERDS2TJ100T	10 1/4W [M]
R618	ERDS2TJ100T	10 1/4W [M]
R621	ERDS2TJ332T	3.3K 1/4W [M]
R622	ERDS2TJ151T	150 1/4W [M]
R623	ERDS2TJ151T	150 1/4W [M]
R624	ERDS2TJ100T	10 1/4W [M]
R625	ERDS2TJ100T	10 1/4W [M]
R631	ERDS2TJ103T	10K 1/4W [M]
R632	ERDS2TJ102T	1K 1/4W [M]
R651	ERDS2TJ103T	10K 1/4W [M]
R652	ERDS2TJ471T	470 1/4W [M]
R653	ERDS2TJ103T	10K 1/4W [M]
R671	ERDS2TJ473T	47K 1/4W [M]
R672	ERDS2TJ221T	220 1/4W [M]
R673	ERDS2TJ105T	1M 1/4W [M]
R674	ERDS2TJ105T	1M 1/4W [M]
R701	ERJ6GEYJ4R7A	4.7 1/10W [M]
R702	ERJ6GEYJ822A	8.2K 1/10W [M]
R703	ERJ6GEYJ823A	82K 1/10W [M]
R704	ERJ6GEYJ102A	1K 1/10W [M]
R705	ERJ6GEYJ124A	120K 1/10W [M]
R706	ERJ6GEYJ102A	1K 1/10W [M]
R707	ERJ6GEYJ474A	470K 1/10W [M]
R708	ERJ6GEYJ154A	150K 1/10W [M]
R709	ERJ6GEYJ473A	47K 1/10W [M]
R710	ERJ6GEYJ103A	10K 1/10W [M]
R711	ERJ6GEYJ154A	150K 1/10W [M]
R712	ERJ6GEYJ221A	220 1/10W [M]
R714	ERJ6GEYJ121A	120 1/10W [M]
R715	ERJ6GEYJ122A	1.2K 1/10W [M]
R717	ERJ6GEYJ102A	1K 1/10W [M]
R718	ERJ6GEYJ102A	1K 1/10W [M]
R721	ERJ6GEYJ101A	100 1/10W [M]
R722	ERJ6GEYJ563A	56K 1/10W [M]
R723	ERJ6GEYJ182A	1.8K 1/10W [M]
R724	ERJ6GEYJ333A	33K 1/10W [M]
R725	ERJ6GEYJ122A	1.2K 1/10W [M]
R726	ERJ6GEYJ473A	47K 1/10W [M]
R727	ERJ6GEYJ682A	6.8K 1/10W [M]
R728	ERJ6GEYJ682A	6.8K 1/10W [M]
R729	ERJ6GEYJ562A	5.6K 1/10W [M]
R731	ERJ6GEYJ822A	8.2K 1/10W [M]
R735	ERJ6GEYJ101A	100 1/10W [M]
R736	ERJ6GEYJ101A	100 1/10W [M]
R744	ERJ6GEYJ104A	100K 1/10W [M]
R745	ERJ6GEYJ155A	1.5M 1/10W [M]
R748	ERJ6GEYJ182A	1.8K 1/10W [M]
R749	ERJ6GEYJ682A	6.8K 1/10W [M]
R752	ERJ8GEYJ220A	22 1/8W [M]
R803	ERDS2TJ224T	220K 1/4W [M]
R804	ERDS2TJ224T	220K 1/4W [M]
R805	ERDS2TJ822T	8.2K 1/4W [M]
R806	ERDS2TJ822T	8.2K 1/4W [M]
R807	ERDS2TJ123T	12K 1/4W [M]
R808	ERDS2TJ123T	12K 1/4W [M]
R809	ERDS2TJ333T	33K 1/4W [M]
R810	ERDS2TJ333T	33K 1/4W [M]
R811	ERDS2TJ333T	33K 1/4W [M]
R812	ERDS2TJ333T	33K 1/4W [M]
R813	ERDS2TJ102T	1K 1/4W [M]
R814	ERDS2TJ102T	1K 1/4W [M]
R815	ERDS2TJ102T	1K 1/4W [M]
R816	ERDS2TJ102T	1K 1/4W [M]
R817	ERDS2TJ473T	47K 1/4W [M]
R818	ERDS2TJ473T	47K 1/4W [M]
R819	ERDS2TJ100T	10 1/4W [M]
R820	ERDS2TJ100T	10 1/4W [M]
R851	ERDS2TJ222T	2.2K 1/4W [M]
	CAPACITORS	
C11	ECBT1E103ZF5	0.01 25V [M]
C12	RCA1CM222ET ⚠	2200 16V [M]
C15	ECBT1H102KB5	1000P 50V [M]
C16	RCA1AM471BT	470P 10V [M]
C17	ECEA0JKA101B	100 6.3V [M]
C18	ECEA1HKA010B	1 50V [M]
C20	ECBT1H102KB5	1000P 50V [M]
C21	RCA1VM101BT ⚠	100P 35V [M]
C22	RCA1VM101BT ⚠	100P 35V [M]
C23	ECEA1EM471B	470 25V [M]
C24	ECEA1EM471B	470 25V [M]
C30	ECBT1E103ZF5	0.01 25V [M]
C31	ECEA1JM470B	47 63V [M]
C32	ECEA1JM470B	47 63V [M]
C33	ECBT1H102KB5	1000P 50V [M]
C41	ECBT1H102KB5	1000P 50V [M]
C42	ECEA0JKA101B	100 6.3V [M]
C43	RCA0JM102BT	1000 6.3V [M]
C44	ECEA1HKA010B	1 50V [M]
C401	ECBT1C103NS5	0.01 16V [M]
C402	ECEA0JKA101B	100 6.3V [M]
C403	ECBT1H221KB5	220P 50V [M]
C404	ECBT1H221KB5	220P 50V [M]
C405	ECBT1C103NS5	0.01 16V [M]
C406	ECBT1H102KB5	1000P 50V [M]
C407	ECBT1C103NS5	0.01 16V [M]
C408	ECBT1C103NS5	0.01 16V [M]
C409	ECBT1C103NS5	0.01 16V [M]
C410	ECBT1C103NS5	0.01 16V [M]
C411	ECBT1C103NS5	0.01 16V [M]

Ref No.	Part No.	Values & Remarks
C412	ECBT1C103NS5	0.01 16V [M]
C461	ECEA1AKA470B	47 10V [M]
C541	ECBT1C103NS5	0.01 16V [M]
C542	ECEA1CKA100B	10 16V [M]
C601	ECBT1C103NS5	0.01 16V [M]
C602	ECBT1H102KB5	1000P 50V [M]
C603	ECBT1C103NS5	0.01 16V [M]
C604	ECBT1H391KB5	390P 50V [M]
C605	ECFR1E104ZF5	0.1 25V [M]
C606	ECEA0JKA101B	100 6.3V [M]
C607	ECBT1C103NS5	0.01 16V [M]
C608	ECBT1C103NS5	0.01 16V [M]
C651	ECEA1HKA010B	1 50V [M]
C652	ECEA1EKA4R7B	4.7 25V [M]
C701	ECEA0JKA330I	33 6.3V [M]
C702	ECUZ1E104MBN	0.1 25V [M]
C703	ECEA0JKA101I	100 6.3V [M]
C704	ECUZ1E104MBN	0.1 25V [M]
C706	ECUZ1H272KBN	2700P 50V [M]
C707	ECUZ1E273KBN	0.027 25V [M]
C708	ECUZ1H392KBN	3900P 50V [M]
C709	ECUZ1E563KBN	0.056 25V [M]
C710	ECUV1H151KCN	150P 50V [M]
C711	ECUZ1E104ZFN	0.1 25V [M]
C712	ECUZ1E104ZFN	0.1 25V [M]
C713	ECUZ1E104MBN	0.1 25V [M]
C714	ECEA0JKA101I	100 6.3V [M]
C715	ECUZ1H182KBN	1800P 50V [M]
C716	ECUZ1H821KBN	820P 50V [M]
C717	ECUZ1E104ZFN	0.1 25V [M]
C718	ECUZ1C224KBN	0.22 16V [M]
C721	ECUZ1H100DCN	10P 50V [M]
C722	ECUZ1H100DCN	10P 50V [M]
C723	ECEA1AKA221I	220 10V [M]
C724	ECUZ1E104MBN	0.1 25V [M]
C725	ECUZ1H102KBN	1000P 50V [M]
C726	ECUZ1H102KBN	1000P 50V [M]
C727	ECA1HAK010XI	1 50V [M]
C728	ECA1HAK010XI	1 50V [M]
C730	ECUZ1E104ZFN	0.1 25V [M]
C731	ECEA0JKA221I	220 6.3V [M]
C732	ECEA0JKA221I	220 6.3V [M]
C733	ECUZ1E104MBN	0.1 25V [M]
C734	ECEA1AKA221I	220 10V [M]
C735	ECUZ1E104ZFN	0.1 25V [M]
C736	ECUZ1E104ZFN	0.1 25V [M]
C737	ECUZ1E104ZFN	0.1 25V [M]
C738	ECUZ1E104MBN	0.1 25V [M]

Ref No.	Part No.	Values & Remarks
C739	ECUZ1H102KBN	1000P 50V [M]
C742	ECUZ1E273KBN	0.027 25V [M]
C743	ECUZ1E104ZFN	0.1 25V [M]
C744	ECUZ1E123KBN	0.012 25V [M]
C745	ECUZ1H102KBN	1000P 50V [M]
C747	ECUV1H221KBN	220P 50V [M]
C749	ECUZ1H222KBN	2200P 50V [M]
C750	ECUZ1E104MBN	0.1 25V [M]
C751	ECUZ1E104MBN	0.1 25V [M]
C753	ECUZ1H471KBM	470P 50V [M]
C754	ECUZ1H471KBN	470P 50V [M]
C762	ECUZ1H471KBN	470P 50V [M]
C801	ECEA1AKA101B	100 10V [M]
C802	ECEA1AKA101B	100 10V [M]
C805	ECCR1H391J5	390P 50V [M]
C806	ECCR1H391J5	390P 50V [M]
C807	ECCR1H391J5	390P 50V [M]
C808	ECCR1H391J5	390P 50V [M]
C809	ECEA0JKA470B	47 6.3V [M]
C810	ECEA0JKA470B	47 6.3V [M]
C811	ECBT1H102KB5	1000P 50V [M]
C812	ECBT1H102KB5	1000P 50V [M]
C813	ECEA1AKA470B	47 10V [M]
	CHIP JUMPER	
RJ701	ERJ6GEY0R00A	0 1/10W [M]
RJ702	ERJ8GEY0R00A	0 1/8W [M]
RJ703	ERJ8GEY0R00A	0 1/8W [M]
RJ704	ERJ8GEY0R00A	0 1/8W [M]
RJ705	ERJ8GEY0R00A	0 1/8W [M]
RJ706	ERJ8GEY0R00A	0 1/8W [M]
RJ707	ERJ8GEY0R00A	0 1/8W [M]
RJ708	ERJ8GEY0R00A	0 1/8W [M]
RJ709	ERJ8GEY0R00A	0 1/8W [M]
RJ710	ERJ8GEY0R00A	0 1/8W [M]
RJ715	ERJ8GEY0R00A	0 1/8W [M]
RJ716	ERJ8GEY0R00A	0 1/8W [M]
RJ721	ERJ6GEY0R00A	0 1/10W [M]
RJ722	ERJ6GEY0R00A	0 1/10W [M]
RJ724	ERJ6GEY0R00A	0 1/10W [M]
RJ726	ERJ6GEY0R00A	0 1/10W [M]
RJ727	ERJ6GEY0R00A	0 1/10W [M]
RJ728	ERJ6GEY0R00A	0 1/10W [M]
RJ731	ERJ6GEY0R00A	0 1/10W [M]
RJ732	ERJ6GEY0R00A	0 1/10W [M]
RJ750	ERJ6GEY0R00A	0 1/10W [M]

Ref No.	Part No.	Values & Remarks
	TEST JUMPER	
TJ701	EYF8CU	TEST JUMPER [M]

Ref No.	Part No.	Values & Remarks

■ Packing Materials & Accessories

Notes : * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors),etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
* The parenthesized in the Remarks columns specify the areas. (Refer to the cover page for area.)
* Parts without these indication can be used for all areas.
* The mark " (SF) " denotes standard part.
* [M] in Remarks column indicates parts supplied by **MESA**.
* Remote Control Unit : Supply period for three years from termination of production.
* Reference for O/I book languages are as follows :

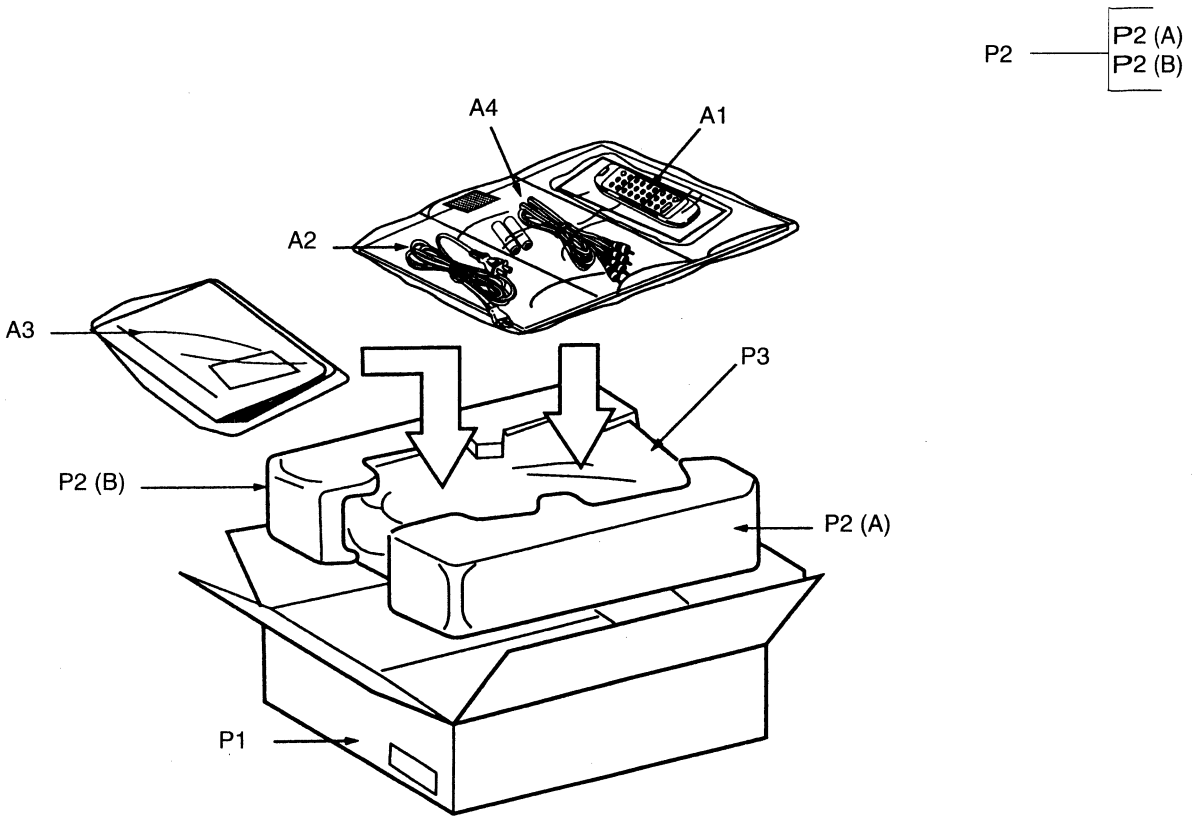
Ar : Arabic Cf : Canadian French Co : Chinese (old) Cn : Chinese (new) Cz : Czech Da : Danish
Du : Dutch En : English Fr : French Ge : German It : Italian Ko : Korean
Po : Polish Ru : Russian Sp : Spanish Sw : Swedish

Ref No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPG4383	PACKING CASE	[M]
P2	RPN1009	POLYFOAM	[M]
P3	RPFX0012	MIRAMAT BAG	[M]

Ref No.	Part No.	Part Name & Description	Remarks
		ACCESSORIES	
A1	EUR645270	REMOCON TRANSMITTER	[M]
A1-1	UR64EC1987B	R/C BATTERY COVER	[M]
A2	RJA0019-2K	AC CORD (SF) ⚠	[M]EG E
A2	VJA0733	AC CORD (SF) ⚠	[M]EB
A3	RQT4943-E	O/I BOOK (En/Sp/Sw)	[M]E
A3	RQT4944-R	O/I BOOK (Ru/Cz/Po)	[M]E
A3	RQT4945-D	O/I BOOK (Ge/It/Fr)	[M]EG

Ref No.	Part No.	Part Name & Description	Remarks
A3	RQT4946-H	O/I BOOK (Du/Da)	[M]EG
A3	RQT4947-B	O/I BOOK (En)	[M]EB
A4	RJL2P004B08A	STEREO CONNECTOR	[M]

■ Packaging



MESA Printed in Singapore
G99050620P/F/M/J/H/S

Order No. MD0010160P0

Parts Change Notice

Model No. SL-MC4P/PC-K & SL-MC7 all series

Please revise the original parts list in the Service Manual to conform to the change(s) shown herein.
If new part numbers are shown, be sure to use then ordering parts.

Reason for Change

*The "▲" item indicates the reason. If no marking, see the Notes in the bottom column.

	1. Improve performance
	2. Change of material or dimension
	3. To meel approved specification
	4. Standardization
	5. Addition
	6. Deletion
▲	7. Correction
	8. Other

Interchangeability Code

**The "▲" item indicates the interchangeability. If no marking, see the Notes in the bottom column.

	Parts		Set Production	
	A	Original	Early	Original or new parts may be used in early or late production set.
		New	Late	Use original parts until exhausted, then stock new parts.
	B	Original	Early	Original parts may be used in early production sets only. New parts may be used in early
		New	Late	or late production sets. Use original parts where possible, then stock new parts.
	C	Original	Early	New parts only may be used in early or late production sets.
		New	Late	Stock new parts.
▲	D	Original	Early	Original parts may be used in early production sets only. New parts may be used in late
		New	Late	production sets only. Stock both original and new parts.
	E	Other		

Part Number

Model No.	Ref. No.	Original Part No.	New Part No.	Notes	Part Name & Descriptions
SL-MC4P/PC-K	IC601	AT24C64 [M]	C3EBJJ000001 [M]	7,D	IC, EEPROM
SL-MC7P/PC/E/EB/EG/GC/GN-K	IC602	UPD780T6G036 [M]	UPD780T6G091 [M]	7,D	IC, U-COM

Please note that the **new** U-COM IC must use together with **new** EEPROM IC. The T.I. No. is M06079 (For Factory Reference only).

File this Parts Change Notice with your copy of the Service Manuals for Model Numbers:

Model No.	Order No.
SL-MC4 P/PC-K	MD9903052A1
SL-MC7 P/PC-K	MD9903044C1
SL-MC7 E/EB/EG-K	MD9905076C2
SL-MC7 GC/GN-K	MD9905086C3

Technics®

© 2000 Matsushita Electronics (S) Pte Ltd. All rights reserved. Unauthorized copying and distribution is a violation of law.

Printed in Singapore M0O1000800 H

Order No. MD0010166P0

Parts Change Notice

Model No. SL-MC3/4/50/59/60/70P/PC-K, SL-MC6/7/310/410 all series, SL-PD5/788P/PC-K, SL-PD10/988PP-K & SL-PD6/8/349/688/888 all series

Please revise the original parts list in the Service Manual to conform to the change(s) shown herein.
If new part numbers are shown, be sure to use then ordering parts.

Reason for Change

*The "▲" item indicates the reason. If no marking, see the Notes in the bottom column.

	1. Improve performance
	2. Change of material or dimension
	3. To meel approved specification
	4. Standardization
	5. Addition
	6. Deletion
▲	7. Correction
	8. Other

Interchangeability Code

**The "▲" item indicates the interchangeability. If no marking, see the Notes in the bottom column.

	Parts		Set Production	
	A Original New	⤫	Early Late	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
	B Original New	↗	Early Late	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible, then stock new parts.
▲	C Original New	↗	Early Late	New parts only may be used in early or late production sets. Stock new parts.
	D Original New	→	Early Late	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
	E Other			

Part Number

Model No.	Ref. No.	Original Part No.	New Part No.	Notes	Part Name & Descriptions
SL-MC3/4/50/59/60/70/410 P/PC-K SL-MC6/7/310 all series SL-PD5/788P/PC-K SL-PD10/988PP-K SL-PD6/8/349/688/888 all series	IC702	MN662741RPA [M]	MN662741RPAL [M]	7,C	IC LSI
SL-MC410E/EB/EG/GC/GN-K	IC702	MN662740RM1 [M]	MN662741RPAL [M]	7,C	IC LSI

Please note that the T.I. No. is 20675 (For Factory Reference only). File this Parts Change Notice with your copy of Service Manuals.

Technics®

© 2000 Matsushita Electronics (S) Pte Ltd. All rights reserved. Unauthorized copying and distribution is a violation of law.

Printed in Singapore M0100080OH